Modern LITHOGRAPHY

TECHNOLOGY DEPT.

In this issue

LNA Report

How To Make Slit Lens

Accurate Print Length

Your Waste Paper

Permanent Sky Blue Lake 2836P-2

Senelith Inks

were the first lithographic inks

made from dyestuffs

treated with sodium tungstate

for better sunfastness

and are still leading

with their outstanding resistance properties

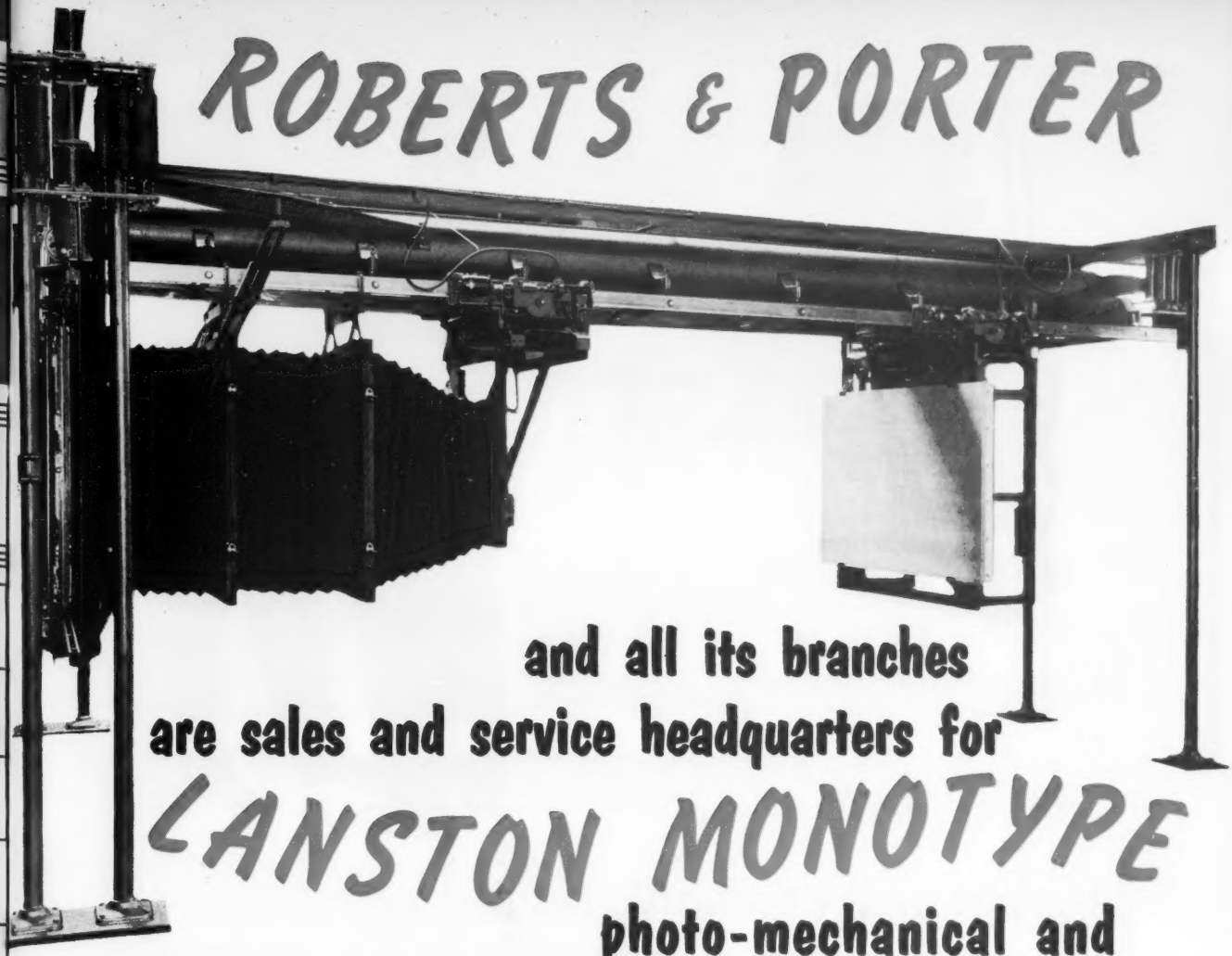
Our booklet "Inks, Lithographic and Printing" may be obtained on request

The Senefelder Company, Inc.

"Everything for Lithography"

32-34 Greene Street New York 13, N. Y.

ROBERTS & PORTER



and all its branches are sales and service headquarters for LANSTON MONOTYPE photo-mechanical and plate-making equipment for all the Graphic Arts

SHOWN ABOVE is the M-H Overhead Suspension Motor-Focusing Color-Precision Camera. It is designed to meet present-day requirements of Lithographers, Offset and Gravure Printers, and Photo-Engravers. It embodies many new and practical features and methods of control not heretofore available. Its design is based on sound mechanical and optical principles calculated to meet any future developments. The M-H Overhead Camera provides the simplest and most direct mounting and positioning of the copy; for holding the lens in its scientifically correct position; and for inserting, holding, manipulating and removing the light-sensitive material, whether wet plate, dry plate, film, paper or metal. SEND FOR FOLDER TODAY!

General Offices: 555 West Adams St., CHICAGO

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DETROIT
1025 Brush St.

BALTIMORE
5 South Gay St.

CINCINNATI
229 E. 6th St.

KANSAS CITY
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LOS ANGELES
344 N. Vermont Ave.

CLEVELAND
1825 East 18th St.

SAN FRANCISCO
1185 Howard St.

PHILADELPHIA
1205 Hamilton St.

. . . for prices and descriptive literature

Roberts & Porter, Inc.
622-626 Greenwich St.
New York, N.Y.

Please send prices and literature on Lanston Monotype equipment

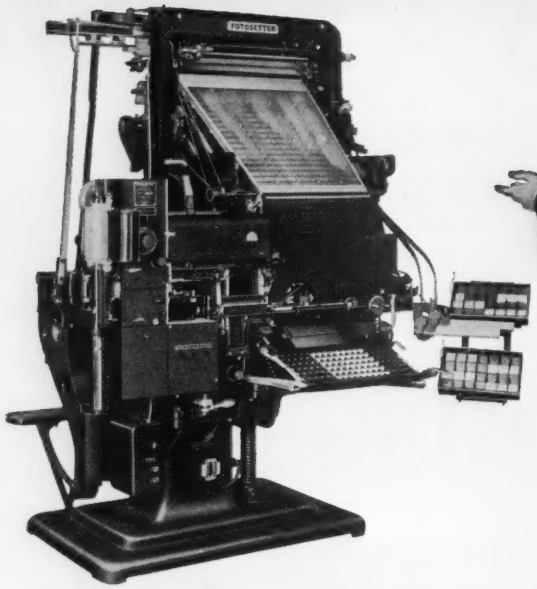
NAME_____

COMPANY_____

ADDRESS_____

CITY_____

No. 1 in a Series



"What does the FOTOSETTER do better?"

"A great many valuable things . . ."

The Fotosetter certainly has proved its advantages. During six years of commercial use it has developed many well proved areas of superiority for photographic composition such as:

1. *Better negatives* from sharp, perfect images.
2. *Better repros* directly from the keyboard.
3. *In every Fotosetter face* all sizes are immediately available.
4. *Every Fotosetter face* sets in every desirable size including 7, 9, 11, 13, 16 and 30 pt.
5. *Enlargements or reductions* are easy to make, need no retouching, are sharp and clean.
6. *White space is free.* Eliminates use or handling of furniture or other spacing materials.
7. *Angles, curves and other effects* are as easily made up to layout requirements as straight matter.
8. *Maximum typographic expression* and flexibility with full kerning, true italics and small caps, connected scripts, emblems and trademarks—all from the keyboard.
9. *Eliminates hours* of camera, darkroom, retouching and repro proofing work. It also eliminates time spent breaking up forms.

Whether your interest lies in newspaper, job printing, advertising composition or specialties, you will find that Fotosetter photographic composition can do your work better and more efficiently.

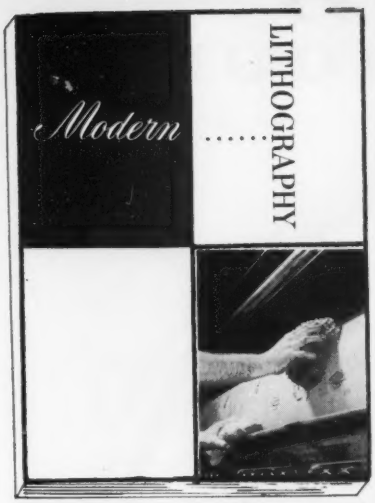
This is the first in a series of ads designed to answer the question "What does a Fotosetter do better?". Reprints of the entire series will be available. Write for them.

Intertype Corporation

360 Furman Street, Brooklyn 1, New York • Chicago, San Francisco, Los Angeles, New Orleans, Boston
In Canada: Toronto Type Foundry Co., Ltd., Toronto, Montreal, Winnipeg, Vancouver, Halifax

If it isn't made by Intertype
it isn't a FOTOSETTER.

FOTOSETTER is a registered trademark • Fotosetter Century Schoolbook



COVER

This graphic illustration of a familiar scene in every litho plant is taken from a fine McCormick-Armstrong Co. publication describing the offset process. Title of the booklet put out by the Wichita, Kan., Co. is "Skilled Hands".

WAYNE E. DORLAND
Publisher

HAMILTON C. CARSON
EDWARD J. MEIER
Associate Editors

RALPH DORLAND
Advertising Manager

Member of ... LITHOGRAPHIC TECHNICAL FOUNDATION

AUDITED PAID CIRCULATION ABC

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MODERN LITHOGRAPHY

VOLUME 23, NUMBER 7 JULY, 1955

SUBSCRIPTION RATES: *One year, $3.00; two years, $5.00. Canada and Pan America, one year, $4.00; two years, $7.00. Foreign, one year, $9.00; two years, $15.00. Group subscription (U. S. only) Four or more entered as a group, $2.00 each. (May be sent to different addresses.)*

Published monthly on the 5th by Industry Publications, Inc., 229 W. 28th St., New York, N. Y. Advertising, Subscription and Editorial Office, Box 31, Caldwell, N. J. Advertising rates made known on application. Closing date for copy—10th of the month preceding month of issue. Reentered as Second Class Matter May 12, 1953, at the Post Office at New York, N. Y., under the Act of March 3, 1879.

Address all correspondence to Box 31, Caldwell, N. J.

LAWSON ANNOUNCES . .

the result of

8

years of successful pioneering

in

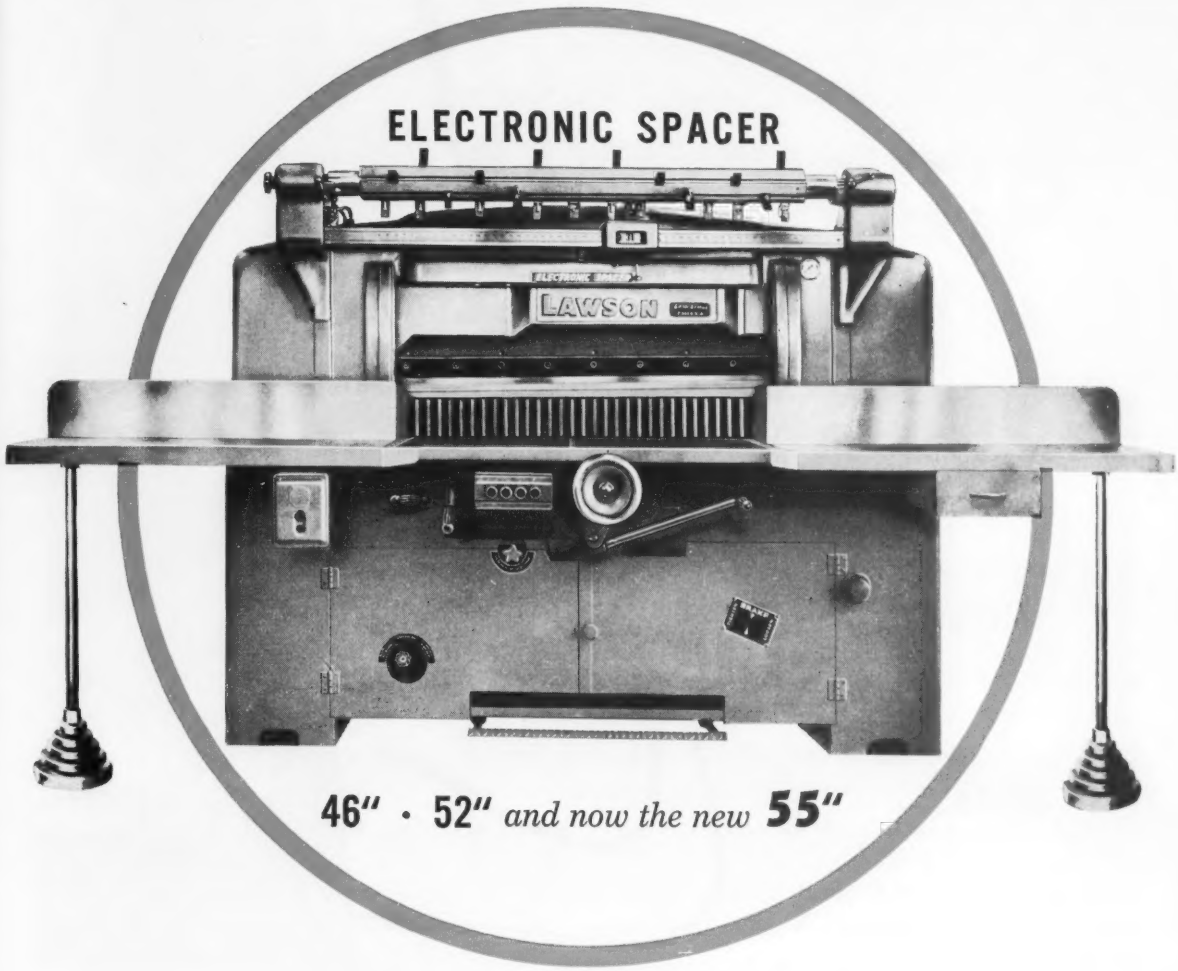
HYDRAULIC CLAMP CUTTERS

The use of hydraulics in paper cutting is not new. In 1947 Lawson introduced the first successful hydraulic clamp paper cutting machine. Experience has proven the merit of this pioneering effort, as evidenced by almost 1000 cutters in daily use in some of America's leading plants; and now of equal importance is the result of a program of continued research and engineering to achieve new heights in accuracy, productivity and performance . . . the "Series V65" Hydraulic Clamp Cutters and Electronic Spacers which represents the ultimate in 46″ — 52″ — 55″ cutters.

LAWSON engineering pioneered as standard equipment such advances as cushion hydraulic clamping, tiptoe hydraulic treadle, 5″ clamp, gears operating in a sealed bath of oil, and other improvements making for speed and accuracy of paper cutting. LAWSON now offers a host of new features: clamping mechanism entirely separate from knife operating unit — clamp pressure remains constant during cutting cycle with no impact action, blow or shock . . . foot treadle applies full clamp pressure as pre-set by the operator . . . oil tank has no internal moving parts . . . there are 18 other new features worthy of your attention.

Also, many new features have been added to the Lawson Electronic Spacer including:
Completely automatic . . . after the last cut the back gauge automatically returns to the first cutting position . . . when the clamp is held down the back gauge will not move forward until treadle is released . . .hexagonal spacer bar can be rotated from any position . . . and others.

S ...THE NEW V-65 SERIES



Lawson pioneered the standardization of its paper cutting machines. This gives users the assurance that Lawson Cutters will meet not only immediate, but also future cutting requirements. When a Motor Operated Back Gauge or Lawson Electronic Spacer is needed to handle additional work, there is no need to trade out the cutter. These additions can be readily applied to present Lawson equipment, right in the customer's plant.

Write for descriptive folder.

E. P. LAWSON CO., inc.

MAIN OFFICE: 426 WEST 33rd ST., NEW YORK 1, N. Y.

CHICAGO
628 SO. DEARBORN ST.

PHILADELPHIA
BOURSE BUILDING

BOSTON
176 FEDERAL ST.

FOR

THOSE

SPECIAL

JOBS...

ANSCO REPROLITH ORTHO TYPE B THIN BASE FILM

It's coated on a low-shrink safety base only .0035" thick—ideal for half-tone positives, overlays, strip-ins and all kinds of lateral reversals.

These outstandingly useful physical characteristics are matched by equally useful photographic properties—full orthochromatic sensitivity . . . high speed . . . wide developing latitude . . . clarity in white areas . . . fine dot etching qualities . . . and steep gradation.

Keep a good supply of Ansco Reprolith Ortho Type B Thin Base Film at all times!

FOR FINEST RESULTS . . . USE ANSCO REPRODOL, the fast-working developer that yields maximum density and high contrast. Laboratory packaged for your convenience.

Ansco

Binghamton, New York. A Division of General Aniline & Film Corporation. *"From Research to Reality."*

HANDS UP

for KERODEX®

the complete safeguard for hands

—supplied by **PITMAN**

KERODEX cream provides maximum protection for the hands of craftsmen in the graphic arts. KERODEX gives a flexible, invisible coating to hands and other exposed skin areas...a long-wearing safeguard against the irritating action of alkalies, solvents, pigments and acids, including chromic acid.

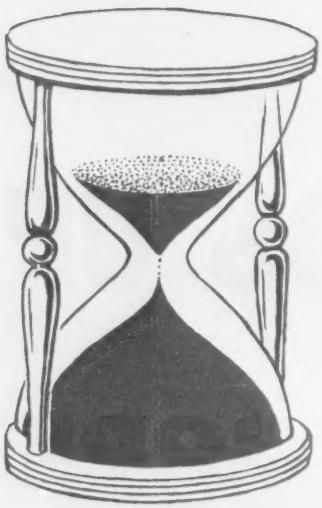
KERODEX is the result of extensive laboratory and plant tests—time-proved protection for all hands. Available in 4 oz. tubes and in economical 1 lb. and 8 lb. containers. Use KERODEX #71 for protection from water soluble agents; KERODEX #51 for water insoluble irritants. Both easy to apply in seconds.

Order KERODEX *from the nearest Pitman office—today.*

PITMAN FOR ALL GRAPHIC ARTS
SUPPLIES—CHEMICALS—EQUIPMENT

HAROLD M. PITMAN COMPANY

Chicago 50, Illinois—33rd Street & 51st Avenue
North Bergen, New Jersey—1110 13th Street
Cleveland 11, Ohio—3501 W. 140th Street
New York 36, New York—230 W. 41st Street
Boston 10, Massachusetts—266 Summer Street
—Pitman Sales Co.



NEARLY A CENTURY OF EXPERIENCE

in Making Fine Papers

Fitchburg Vellum
Fitch-Brite
Hillcourt Opaque Offset
Hillcourt Greeting
Hillcourt Papeteries
Fitchburg Parchment

Nearly a century of experience in making fine papers for the graphic arts industry is engineered into these Fitchburg papers to make each one outstanding in its own field. Every paper in the Fitchburg line is notable for superior reproduction qualities, excellent press performance, and reasonable price. These papers are available in plain, felt, and embossed finishes. Lithographers and printers will find they offer unsurpassed value.

FITCHBURG PAPER COMPANY FITCHBURG, MASS.

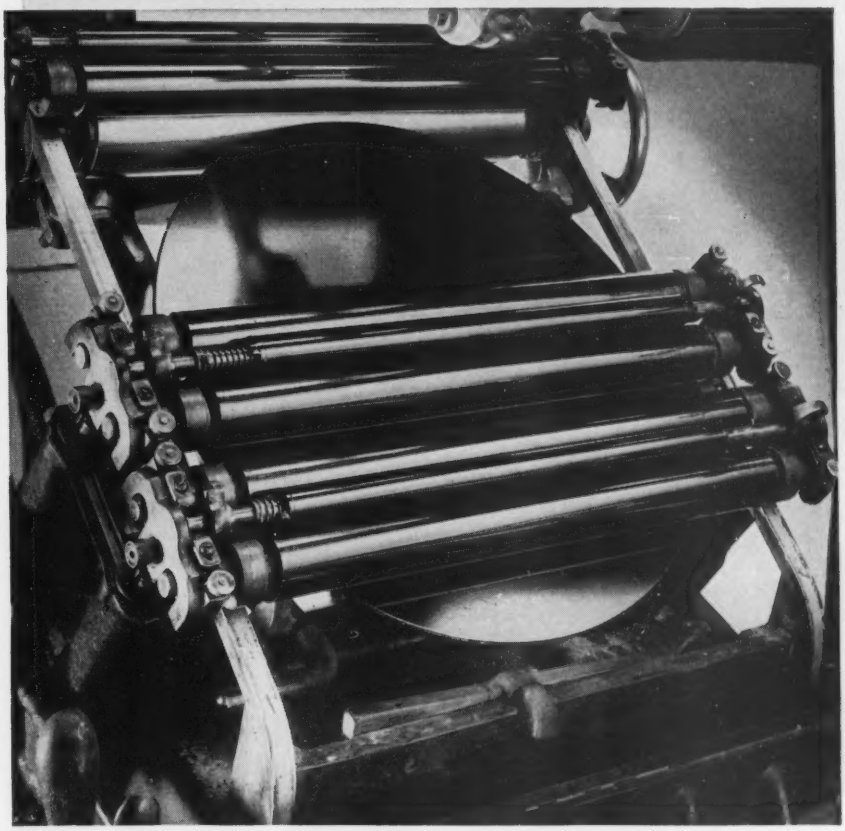
Established in 1861

Write for complete information, sample sheets, and reference to local distributors

Fitchburg Paper Company

MILLS AND GENERAL OFFICES: FITCHBURG 6, MASS.
NEW YORK OFFICE: 250 PARK AVE., N.Y. 17

Until you get the RIGHT ROLLER ... Presswork's a gamble



For the versatile job press, no rollers have ever given finer results than glue-glycerin composition rollers made by Sam'l Bingham's Son Mfg. Co.

The proven ability of composition to "pick up and let go" is indicated by the ease with which you can clean the ink from the surface with a sweep of your finger. This means less ink can be run, yet there is maximum coverage.

But presses differ—in speeds, in sizes and in principles—and each requires its own kind of "right roller." So whether you use letterpress, offset, flexographic or rotogravure equipment, you can rely on Bingham for the "right roller" in composition, rubber and vulcanized oil to remove the gamble from your presswork.

SAM'L BINGHAM'S SON MFG. CO.

MANUFACTURERS OF

PRINTERS' ROLLERS

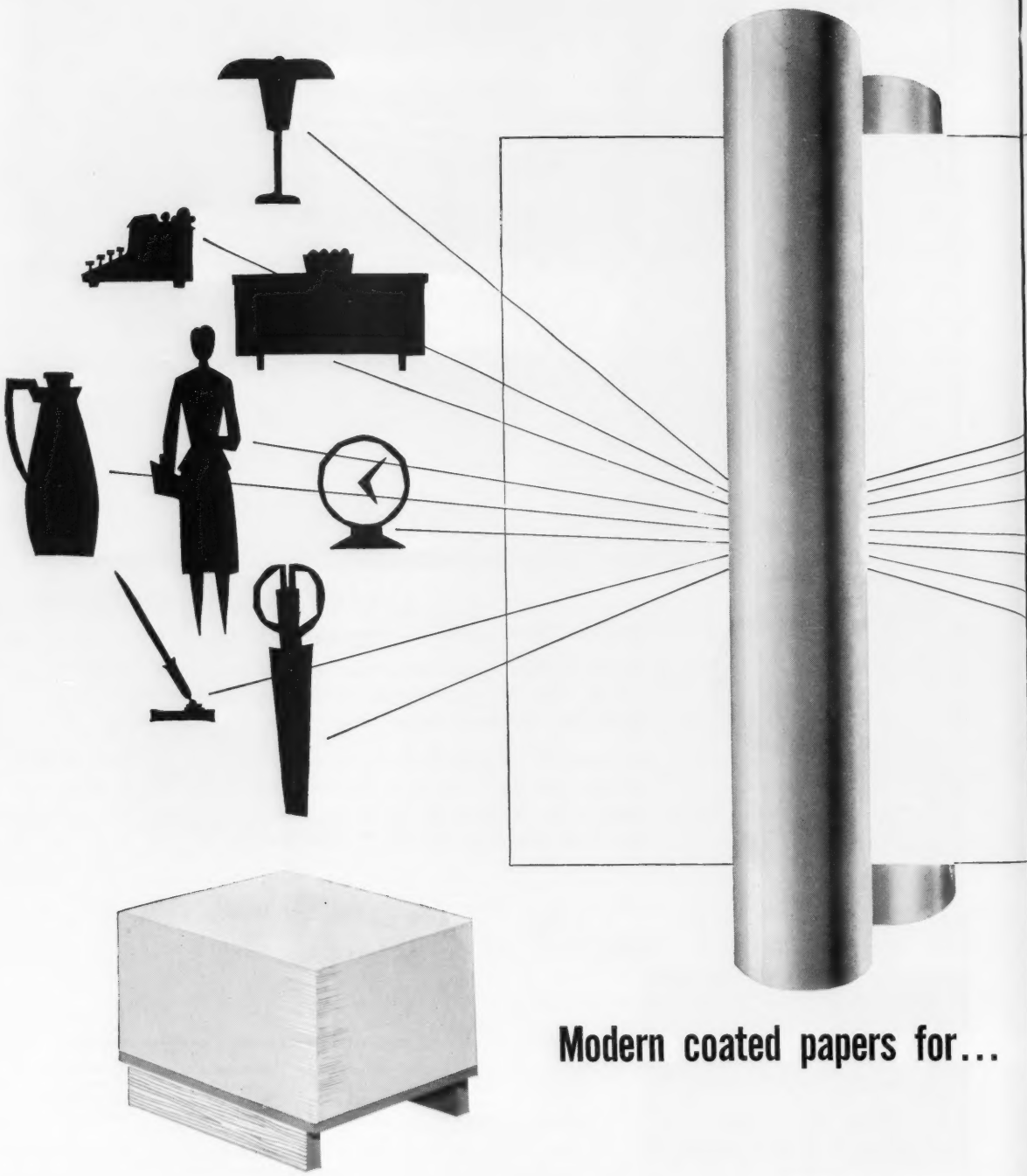
the Right Roller right away

Rubber rollers re-ground quickly and accurately in each of our modern factories—

CHICAGO *Home Office*	CLEVELAND	HOUSTON	MILWAUKEE	PITTSBURGH
ATLANTA	DALLAS	INDIANAPOLIS	MINNEAPOLIS	ST. LOUIS
CINCINNATI	DES MOINES	KALAMAZOO	NASHVILLE	SPRINGFIELD, O.
	DETROIT	KANSAS CITY	OKLAHOMA CITY	TAMPA, FLA.

COMPOSITION · · · RUBBER · · · VULCANIZED OIL Rollers

Everything comes to *life* on



Modern coated papers for...

Kimberly-Clark Lithofect Offset Enamel

For fine offset reproduction at a modest cost, be sure to try smooth, white Lithofect Offset Enamel. It's the modern paper that gives sharp, clear, lifelike impressions from new or old equipment—because it's *engineered* for today's new inks and lithographing techniques.

What's more, Lithofect's careful balance of dimensional stability, strength and all-around uniformity assures you of maximum performance on the press—accurate multi-color register, too!

Ask your Kimberly-Clark distributor for samples of Lithofect or any of the other outstanding papers listed below. You'll find you do your best on Kimberly-Clark stock!

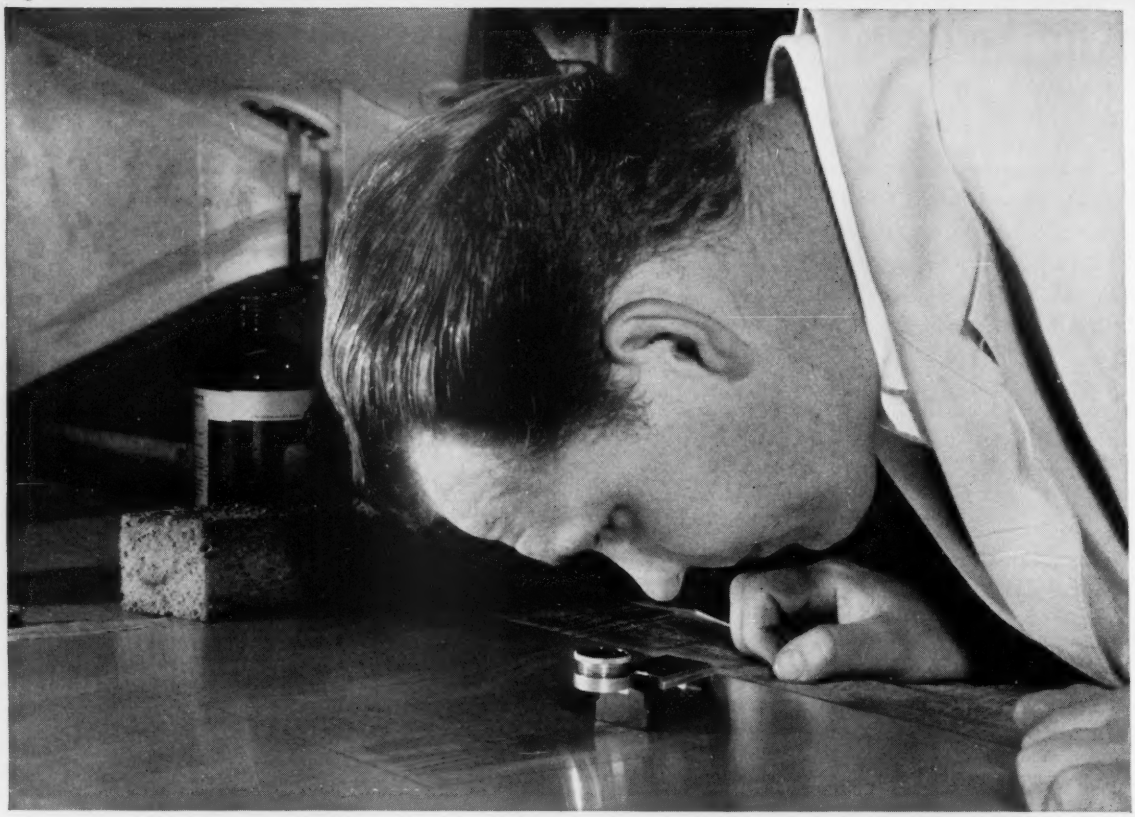
Modern Lithography: Prentice Offset Enamel, Lithofect Offset Enamel, Shorewood Coated Offset, Fontana Dull Coated Offset.

Modern Letterpress: Hifect Enamel, Crandon Enamel, Trufect Coated Book, Multifect Coated Book.

Kimberly-Clark

COATED PRINTING PAPERS

Kimberly-Clark Corporation • Neenah, Wisconsin

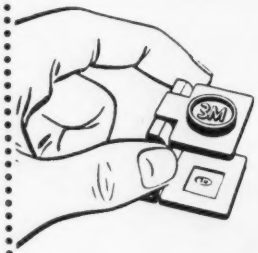


Ask your local platemaker!

For better results at lower cost . . . look to your local lithographic platemaker. He's an offset plate expert!

For "know-how" to help you get the best possible printing results at the lowest possible cost, call in your local platemaker. He's proud of his platemaking ability and fully understands offset printing. His expert advice will help you get better results. To assure superior printing, he will undoubtedly recommend pre-sensitized aluminum plates . . . "3M" Brand Photo Offset Plates, to speed production and boost profits.

Remember . . . *it will pay you* to see your local lithographic platemaker on all your offset problems. His expert help will save you time and money!



MINNESOTA MINING & MFG. CO., DEPT. ML-75T ST. PAUL 6, MINN.

"3M" Photo Offset Plates
BRAND

Please send me the names of the lithographic platemakers in my city who supply "3M" Brand Lithographic Plates, along with complete information on these plates.

We have a_____ Press. Position_____

Name_____ Company_____

Address_____ City_____ State_____

"3M" Made in U.S.A. by Minnesota Mining & Mfg. Co., Saint Paul 6, Minnesota. General Export: 122 E. 42nd St., New York 17, N. Y. In Canada: London, Ontario

Published in the interest of Trade Shop Lithographic Platemakers by the manufacturers of the
World's Largest-Selling Pre-Sensitized All-Aluminum Photo Offset Plates

365-day salesman

The advertising calendar works a seven-day week—in homes, in offices, wherever sales can be cultivated. Your company's calendar is a friend-maker and a daily reminder of your products or services. Oxford provides a variety of fine papers particularly suited to the colorful reproduction essential for calendars that help build sales. Ask your Oxford Merchant to show you successful examples.

TWO VALUABLE AIDS. *(1) The new* **OXFORD SELECTOR CHART** *is a time-saving master guide to the right grade for each purpose. (2) The new* **OXFORD PAPER COST CALCULATOR** *gives the exact cost per 1000 sheets for all common weights and sizes. Ask your nearby Oxford Merchant or write us direct.*

Oxford Papers *Help Build Sales*

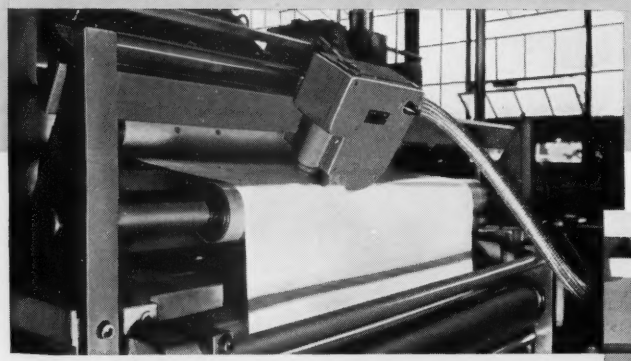
OXFORD PAPERS

OXFORD PAPER COMPANY, *230 Park Avenue, New York 17, N. Y.*
OXFORD MIAMI PAPER COMPANY, *35 East Wacker Drive, Chicago 1, Ill.*
MILLS AT RUMFORD, MAINE, AND WEST CARROLLTON, OHIO

designed for your press protection

the new Champlain photoelectric REGISTRON

gives positive, accurate web registration from one central control point



The web scanner monitors the web, predicts an off-register condition before the cylinder is reached.

Remote master control panel at delivery end of a Champlain 8-color, 36" rotogravure press. All registration is controlled from this point.

Developed, perfected and manufactured by one of the oldest, most reliable builders of rotary presses and auxiliary equipment, the Champlain REGISTRON assures constant printing accuracy with minimum handling. Not only printing but cutting and blanking operations too can be kept in perfect register — protecting you against unnecessary stock losses — providing unerring electronic supervision regardless of web speed. And this pinpoint control can be achieved from a single central point with a minimum of adjustments.

Master control panel, super-sensitive web scanner, cylinder phase detector, and individual control unit—all are compactly and sturdily constructed for maximum operating life, greatest money saving efficiency, and simplest maintenance requirements.

As the only manufacturer of presses currently producing a registering "eye", Champlain offers years of experience in solving your specialized problems, in helping you turn out the high quality production your customers demand. To other outstanding Champlain advantages add to your production line these benefits of the REGISTRON:

- **no clear web track or printed register mark needed — no edge waste or side trim.**
- **independence of web speed of photoelectric phase detector (Champlain patented).**
- **advance phasing at standstill possible — no loss of misregistered stock.**
- **independence of color variation in the copy — a Champlain exclusive.**
- **no limit to number of press units centrally controlled from convenient location.**

Champlain

Champlain's Electronics Department is staffed with able and experienced engineers — men thoroughly familiar with the development and application of special electronic equipment in printing and packaging operations. Look to Champlain for engineering planning assistance, for all press requirements, and for such auxiliary equipment as sheeters, cutters—creasers, dryers, special fabricating machinery and electronic controls.

Champlain manufactures a complete line of rotogravure, flexographic, rotary letterpress and allied equipment for packaging and specialty printing.

Write today for catalog of Champlain press equipment and full information on the new Champlain photoelectric *Registron*. Champlain Company, Inc., 88 Llewellyn Ave., Bloomfield, N. J. Chicago office: 520 N. Michigan Ave., Chicago 11, Ill.

NEW...

DIS-COVER*

DISPOSABLE DAMPENING ROLLER COVER

Low in Cost!
Lint Free!
Chemically Impregnated!

● **The DIS-COVER fabric is designed to accept the press ink that would normally collect upon the usual base fabrics such as molleton or knitted turkish towel types of fabrics. Its ability to prevent such contamination allows the expensive base fabrics to carry an even supply of fountain solution from the water roller to the form dampeners**

ECONOMICAL

The DIS-COVER will reduce your present costs for dampening materials 50% more.

Quick and EASY to apply—like pulling on your socks and almost as fast.

Color change? Throw away the DIS-COVER, you can't afford to wash rollers for the same cost of a new and clean DIS-COVER.

Maintains higher press production. The fountain solution cannot be "blocked" by greasy, water repellent areas commonly found in other covers.

By changing the low cost DIS-COVER, molleton has run 8 weeks without washing or replacement.

No press "down time" waiting for clean rollers.

EFFICIENT

The DIS-COVER is lint free and will prevent lint, from the usual cover, reaching the plate.

Molleton seams or coarse fabric surfaces are prevented from "marking" the heaviest solids or finest halftone dots.

Millions of DIS-COVER "pores" allow your expensive molleton or knitted material to feed moisture to the plate evenly and uniformly without regard to the surface condition of the DIS-COVER.

Less water—Less ink emulsification—More color brilliance.

The chemically impregnated DIS-COVER will absorb moisture evenly and uniformly and helps prevent dry spots in the dampeners.

Much lighter pressure setting can be used. No need to "force" moisture onto the plate. Reduces moisture demand up to 50%.

Write for nearest dealer and brochure

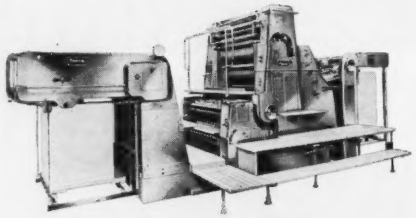
*Trademark and Patents Applied for by

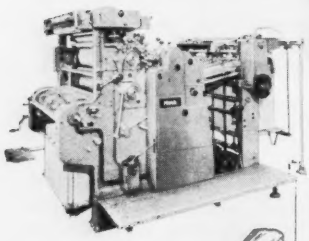
NORMAN A. MACK ASSOCIATES
INCORPORATED
48 RIPPOWAM ROAD STAMFORD, CONN.

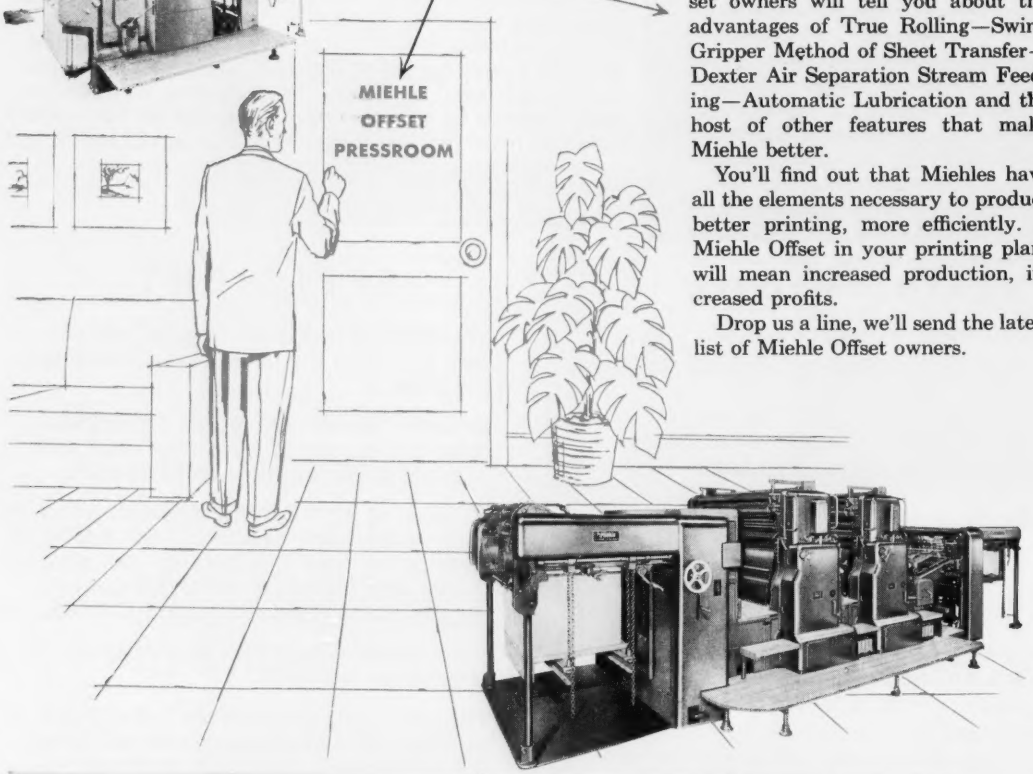
DETROIT PUBLIC LIBRARY

Investigate before you invest!

Knock on any door....







Who can tell the Miehle story better than the Miehle Company? The Miehle owner, of course! Miehle Offset owners will tell you about the advantages of True Rolling—Swing Gripper Method of Sheet Transfer—Dexter Air Separation Stream Feeding—Automatic Lubrication and the host of other features that make Miehle better.

You'll find out that Miehles have all the elements necessary to produce better printing, more efficiently. A Miehle Offset in your printing plant will mean increased production, increased profits.

Drop us a line, we'll send the latest list of Miehle Offset owners.

MIEHLE PRINTING PRESS & MANUFACTURING COMPANY
CHICAGO 8, ILLINOIS

The Miehle

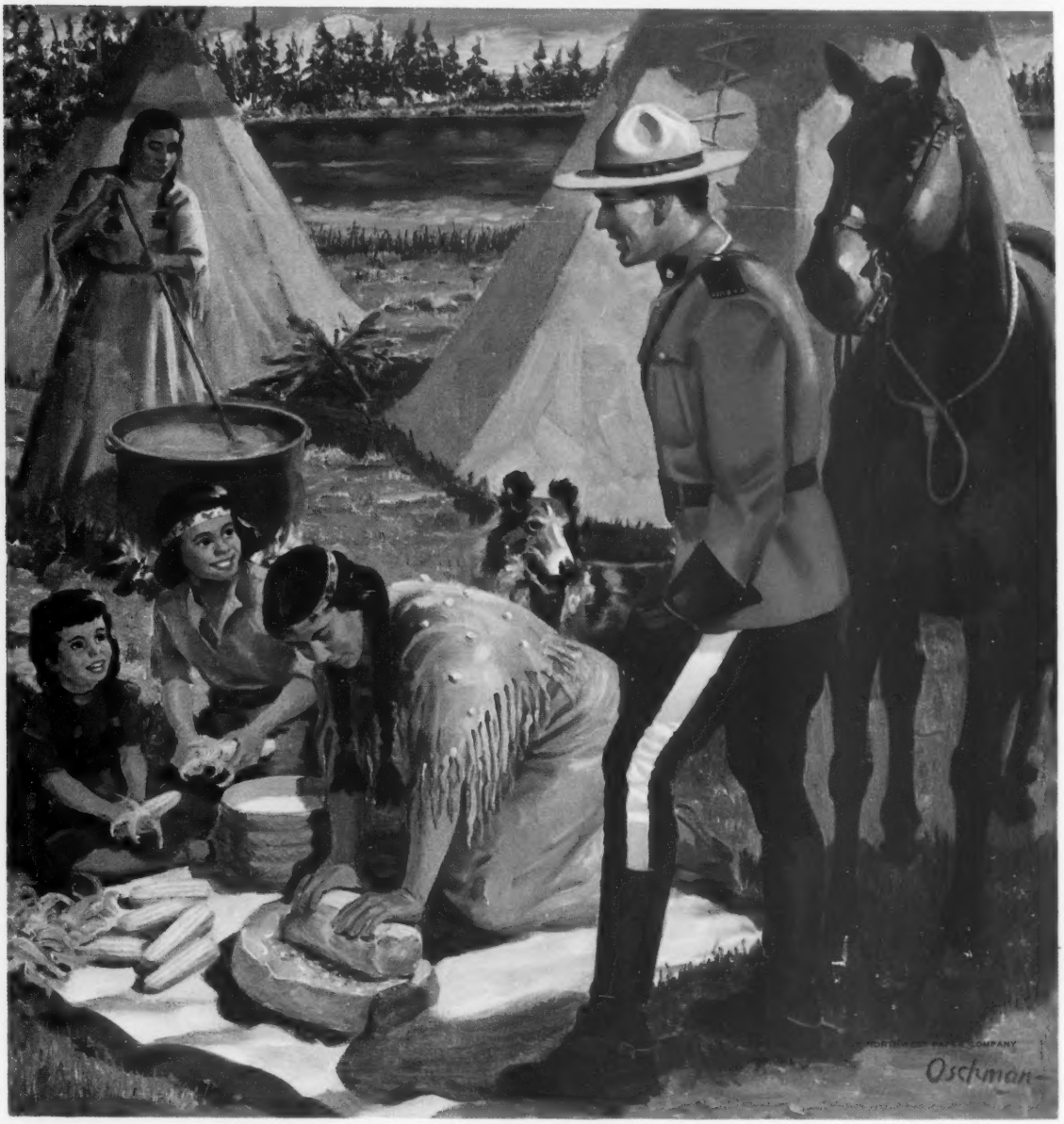
Leader among the world's manufacturers of fine printing equipment

PRESS	SHEET SIZE	SPEEDS UP TO
29 Single Color	23 x 29	7000
36 Single Color	23 x 36	6500
41 Single Color	30 x 42	6800
49 Single Color	36 x 49⅝	6500
41 Two Color	30 x 39	6800
49 Two Color	36 x 49⅝	6500
61 One to Five Color*	42 x 58	6500
76 One to Five Color*	52 x 76	6000

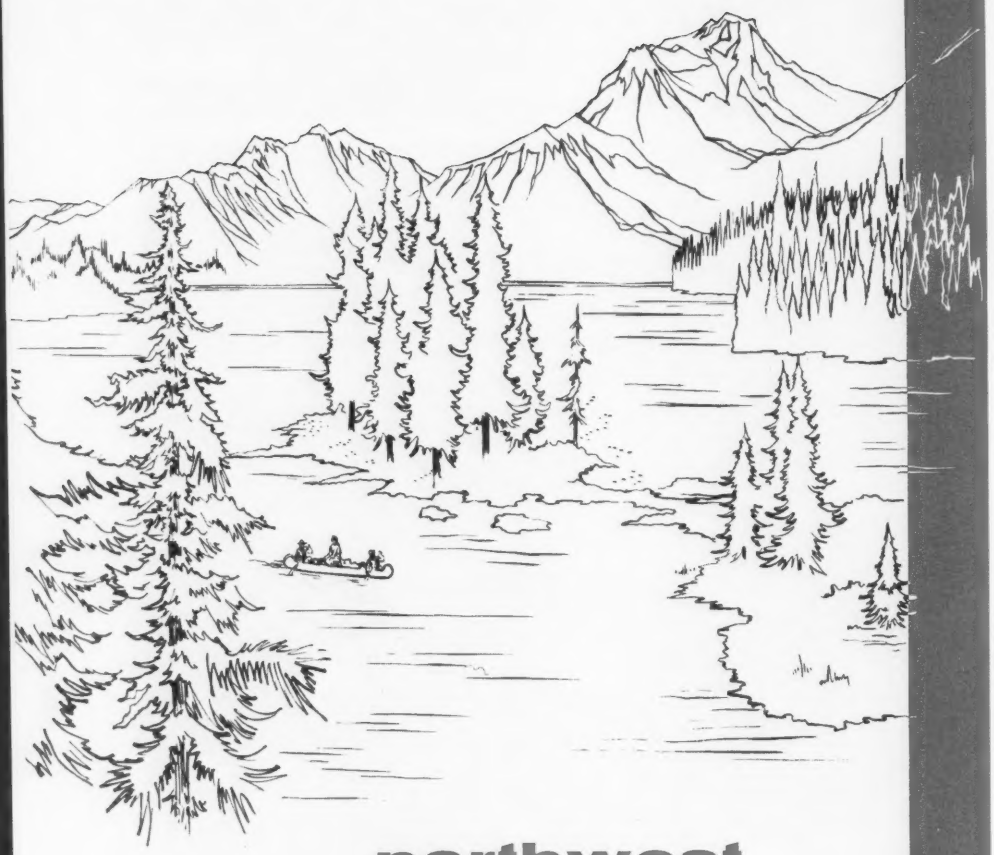
*The Miehle 61 and 76 Offsets are built on the Unit Construction principle and are available as one, two, three, four and five color presses.

Northwest Pedigreed Papers

ALWAYS MAKE GOOD PRINTING BETTER...



The Northwest Paper Company • Cloquet, Minnesota



northwest

pedigreed papers

always make good printing better...

the northwest paper company cloquet, minnesota

SALES OFFICES

CHICAGO 6, 20 N. Wacker Drive

MINNEAPOLIS 2, Foshay Tower

ST. LOUIS 3, Shell Building

printing papers

Mountie Offset

Mountie Text

Northwest Velopaque Text

Northwest Velopaque Cover

Northwest Index Bristol

Northwest Post Card

Mountie E. F. Book

Mountie Eggshell Book

Non-Fading Poster

Northwest Bond

Northwest Ledger

Northwest Mimeo Bond

Northwest Duplicator

Carlton Bond

Carlton Mimeograph

Carlton Ledger

Carlton Duplicator

North Star Writing

envelope papers

Mountie

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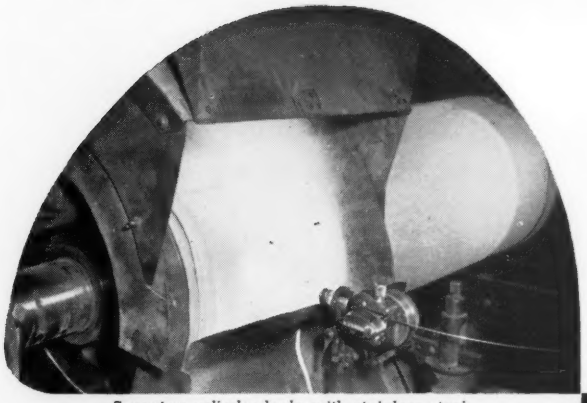
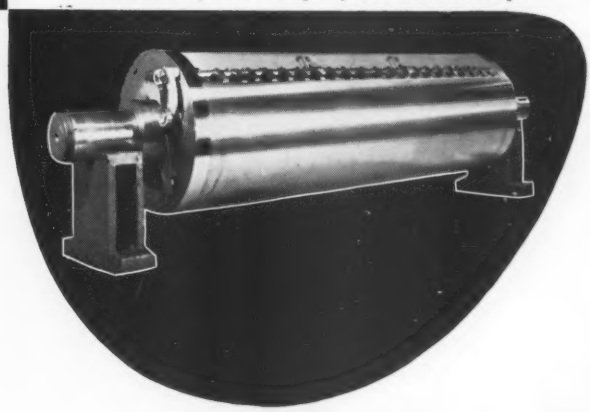


Spraying cylinder body with stainless steel.

Reconditioned Cylinder is fully inspected before delivery.



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*IPI's HIGH COLOR-STRENGTH OFFSET LITHO INK

New IPI Lithogem colors are first choice with leading litho plants all over the world. These colors really sparkle, are just as brilliant when dry as when wet . . . and they stay press-ready and uniform in body and tack until used.

Lithogem inks are more foolproof on the press . . . set faster with excellent binding qualities. And they hate water, reduce greasing problems to a minimum to make colors stay cleaner, stronger.

Compare Lithogem with the best regular and process colors you are now using. Ask your IPI representative about Lithogem.

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INDIAN ART OF THE AMERICAS

The original of the Indian ceremonial mask, shown here in IPI Lithogem colors, was carved in wood, brightly painted, and represented a supernatural being of the Kwakiutl tribe. These Indians lived in a dramatic setting along the North Pacific Coast of North America—a world of towering mountains, big trees, big fish, big game. They injected this same sense of bigness into their ceremonial dances—tribal myths acted out by fantastically masked figures of their own artistic invention.

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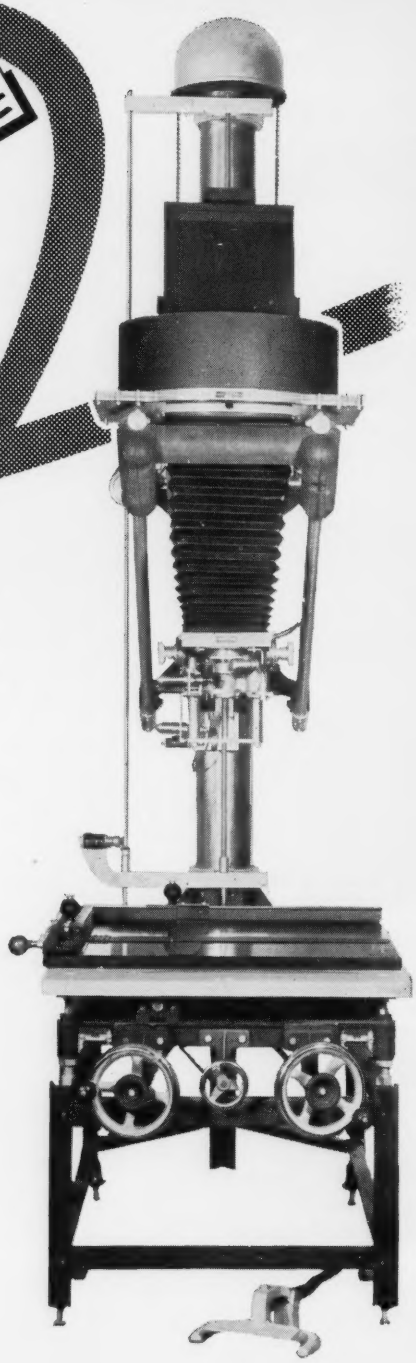

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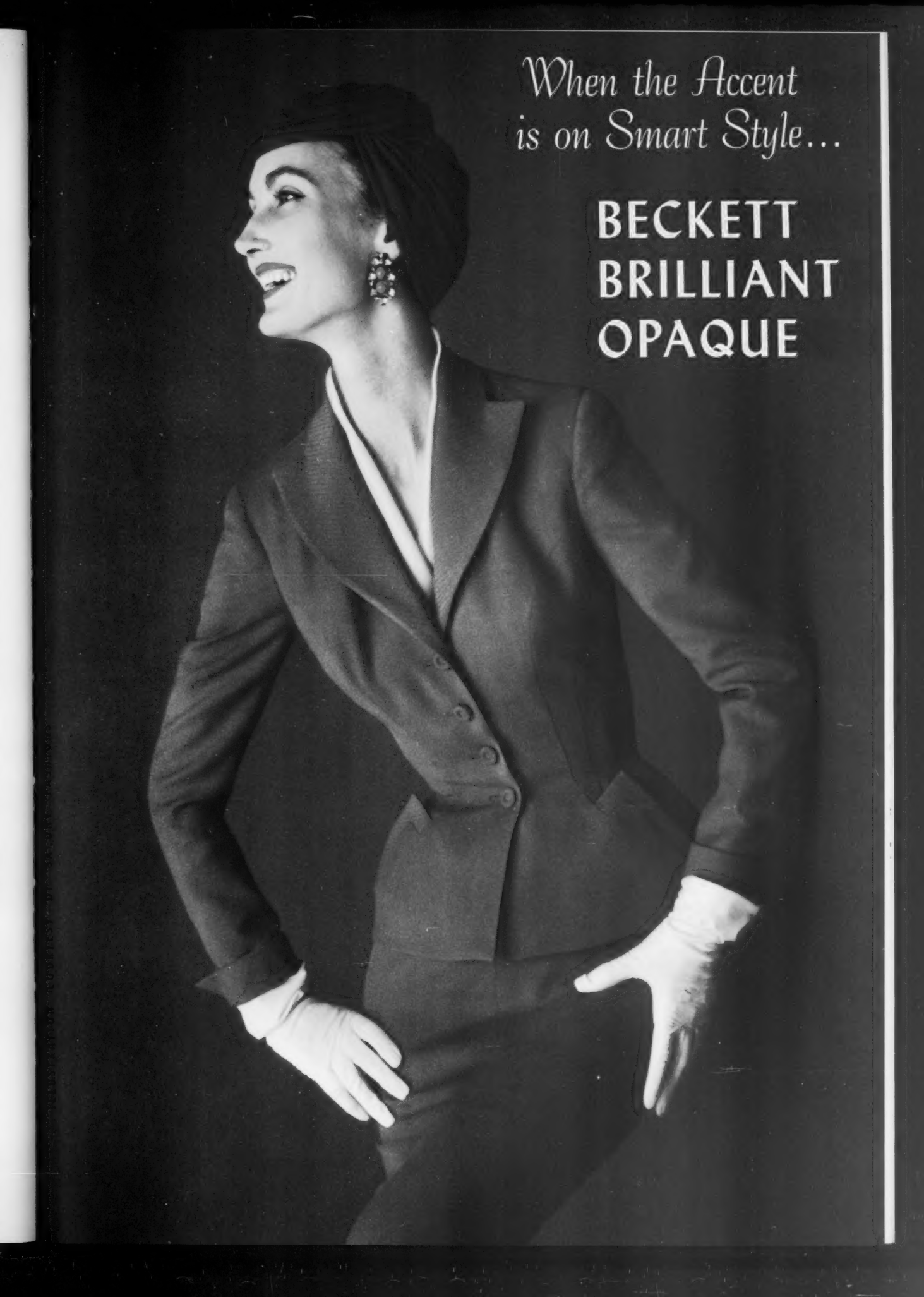
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Makers of Buckeye Cover, Duplex Buckeye Cover, Beckett Cover, Spanish Grain Duplex Cover, Beckett Brilliant Opaque Cover, Buckeye Text, Beckett Text, Beckett Tweed Text, Beckett Vellum, Beckett Offset, Beckett Brilliant Opaque, Beckett Hi-White, Greetings, Announcements, Writings and Specialties.

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They cry and scream, "Ours is the best!"—but you'll notice (if you've got a noticer handy) that Roberts & Porter's Tru-Dot Blanket is out-selling all the others, *double in spades!*

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Pressmen want *Tru-Dot* because *Tru-Dot* is true to the dot and *vice versa!* Order your supply today!

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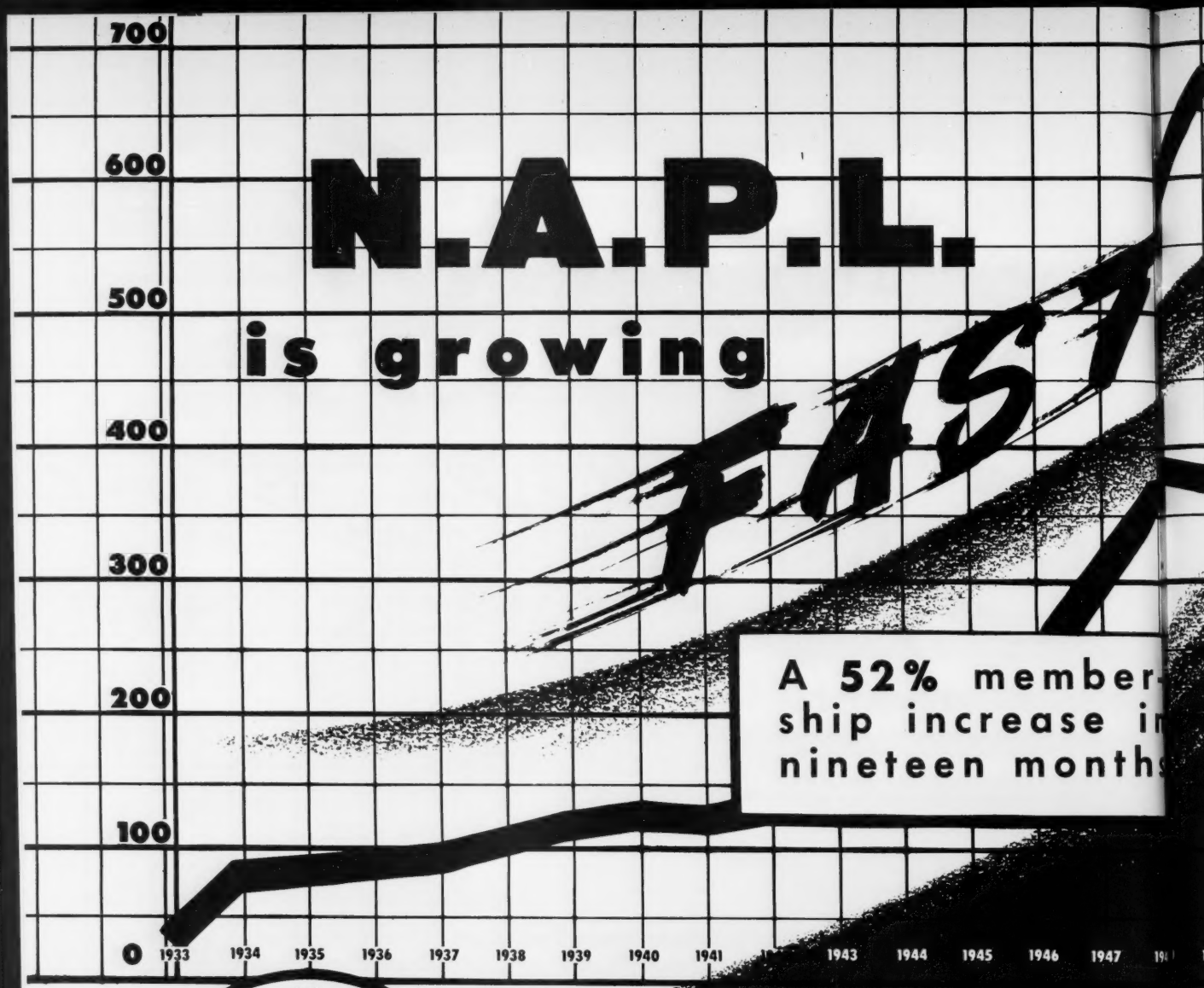

NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS

23rd ANNUAL C

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683
MAY '55

Here are SOLID REASONS for this continuous growth

SERVICES...

The effectiveness of an association is measured by benefits brought to its members. Such services have determined NAPL's growth. Members call on NAPL for information and service — cost studies, data on management problems, production aids, and many other business helps. These services, all indispensable to the lithographer, NAPL constantly supplies to its members.

BULLETINS...

The membership is kept informed of the changing lithographic picture through worthwhile bulletins which deal with subjects of vital importance to every lithographer.

LABOR RELATIONS...

Specific information on labor demands and settlements to show wage rates and working conditions as they develop, are made available to the membership.

TRADE CUSTOMS...

NAPL codified Trade Customs many years ago and lithographed them in chart form so every member can secure copies for both salesmen and customers.

These are some reasons why the National Association of Photo-Lithographers is growing so fast. The industry knows that the NAPL is a good place to secure this valuable data.

NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS
317 West 45 St., New York 36, N. Y.

1951 1952 1953 1954 1955

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SEPTEMBER 21 - 24, 1955

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Trade Events

Lithographers National Assn., annual convention, June 20-23, Lake Placid Club, Lake Placid, N. Y.

International Association of Printing House Craftsmen, Inc., annual convention, Aug. 7-10, Hotel Netherland Plaza, Cincinnati.

Screen Process Printing Association, International, annual convention, Sept. 10-14, Atlantic City.

National Assn. of Photo-Lithographers, annual convention and exhibits. September 21-24, Statler Hotel, Cleveland.

Canadian Lithographers' Association, annual convention, Sept. 25-28, Seigniory Club, Montebello, Quebec.

National Metal Decorators Association annual convention, Oct. 10-12, Chalfonte-Haddon Hall, Atlantic City, N. J.

Printing Industry of America, annual convention, Oct. 15-20, Chalfonte-Haddon Hall, Atlantic City, N. J.

Litho Schools

CANADA—Ryerson Institute of Technology, School of Graphic Arts, 50 Gould St., Toronto, Ont., Canada.

CHICAGO—Chicago Lithographic Institute, Giessner House, 1800 S. Prairie Ave., Chicago 16, Ill.

CINCINNATI—Ohio Mechanics Institute, Cincinnati, Ohio.

LOS ANGELES—Los Angeles Trade Technical Junior College, 1646 S. Olive St., Los Angeles 15, Calif.

MINNEAPOLIS—Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis 3, Minn.

NASHVILLE—Southern School of Printing, 1514 South St., Nashville, Tenn.

NEW YORK—New York Trade School, Lithographic Department, 312 East 67 St., New York, N. Y.

OKLAHOMA—Oklahoma A & M Technical School, Graphic Arts Dept., Okmulgee, Okla.

ROCHESTER—Rochester Institute of Technology, Dept. of Publishing & Printing, 65 Plymouth Ave., South Rochester 8, N. Y.

PHILADELPHIA—Murrell Dobbins Vocational School 22nd and Lehigh, Philadelphia, Pa.

PITTSBURGH—Carnegie Institute of Technology, Dept. of Printing Administration, Pittsburgh.

SAN FRANCISCO—City College of San Francisco, Ocean and Phelan Aves., Graphic Arts Department.

ST. LOUIS—David Ranken, Jr. School of Mechanical Trades, 4431 Finney St., St. Louis 8, Mo.

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WEST VIRGINIA—W. Va. Institute of Technology, Montgomery, W. Va.

Trade Directory

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National Association of Photo-Lithographers
Walter E. Soderstrom, Exec. V. P.
317 West 45 St., New York 36, N. Y.

Lithographers National Association
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National Assn. of Litho Clubs
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Printing Industry of America
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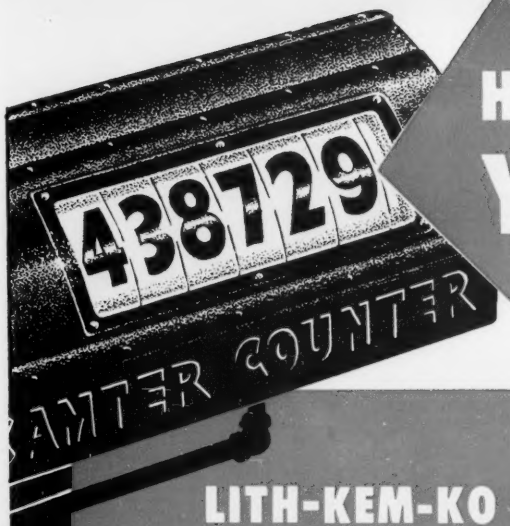

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Take 60 Seconds and Compare

Economical Manifest Bond with Any Other Economy Sulphite

Take ten seconds for texture — note the smooth *printable* surface . . . the quality feel.

Take ten seconds for color — note the *brighter* blue white of Manifest Bond . . . the shade that looks *whiter*, cleaner under natural or artificial light.

Take ten seconds for strength — note that Manifest Bond is a much *stronger* sheet than most economy sulphites.

Take *thirty* seconds for performance — look over the printed Manifest Bond samples any Eastern merchant will be glad to show you. Note how the specially sized surface, dimensional stability and micromatic trimming result in square-cornered sheets that take ink evenly . . . feed smoothly . . . look like a *lot* more than they cost.

If you want to save money . . . and still do a quality job

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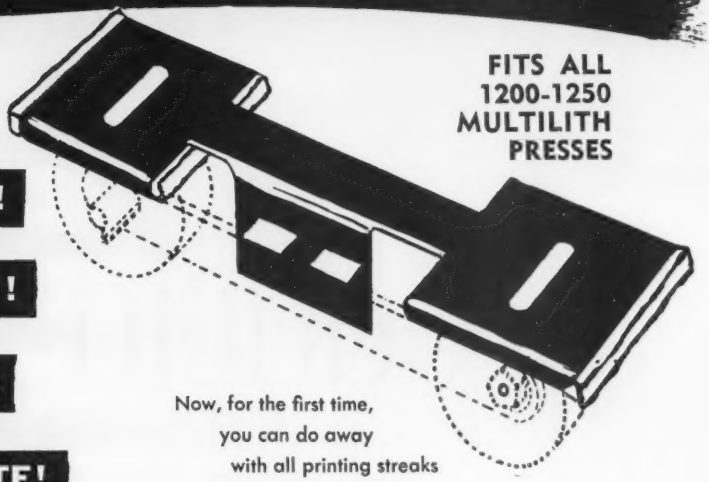

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COMPLETELY GUARANTEED!

Now, for the first time, you can do away with all printing streaks due to ejector wheels running over printed areas.

This simple, but ingenious new STREAK ELIMINATOR is a necessity for every Multilith press. Simply insert wiper pad, squeeze on some cleaning fluid, and merely snap on STREAK ELIMINATOR to Ejector Wheels (as illustrated above). Multilith presses are now ready to run . . . free of Ejector Wheel Streaks.

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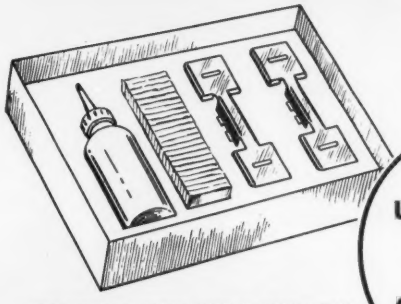
The EJECTOR WHEEL STREAK ELIMINATOR will pay for itself on the first few jobs you use it: UNCONDITIONALLY GUARANTEED



THE EJECTOR WHEEL STREAK ELIMINATOR comes complete with a full year's supply of pads, plastic squeeze bottle, and a generous supply of STREAK ELIMINATOR FLUID. Additional wiper pads can be re-ordered through your authorized ROLL-O-GRAPHIC dealer.

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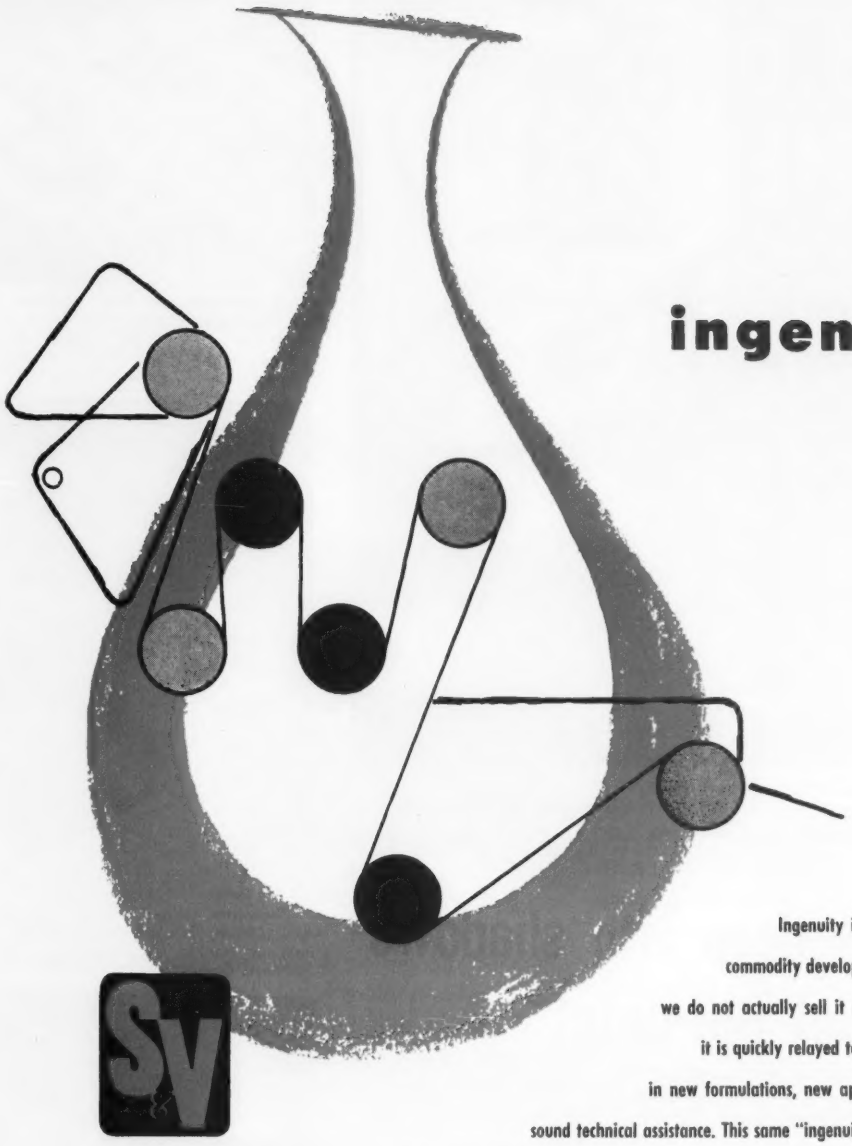

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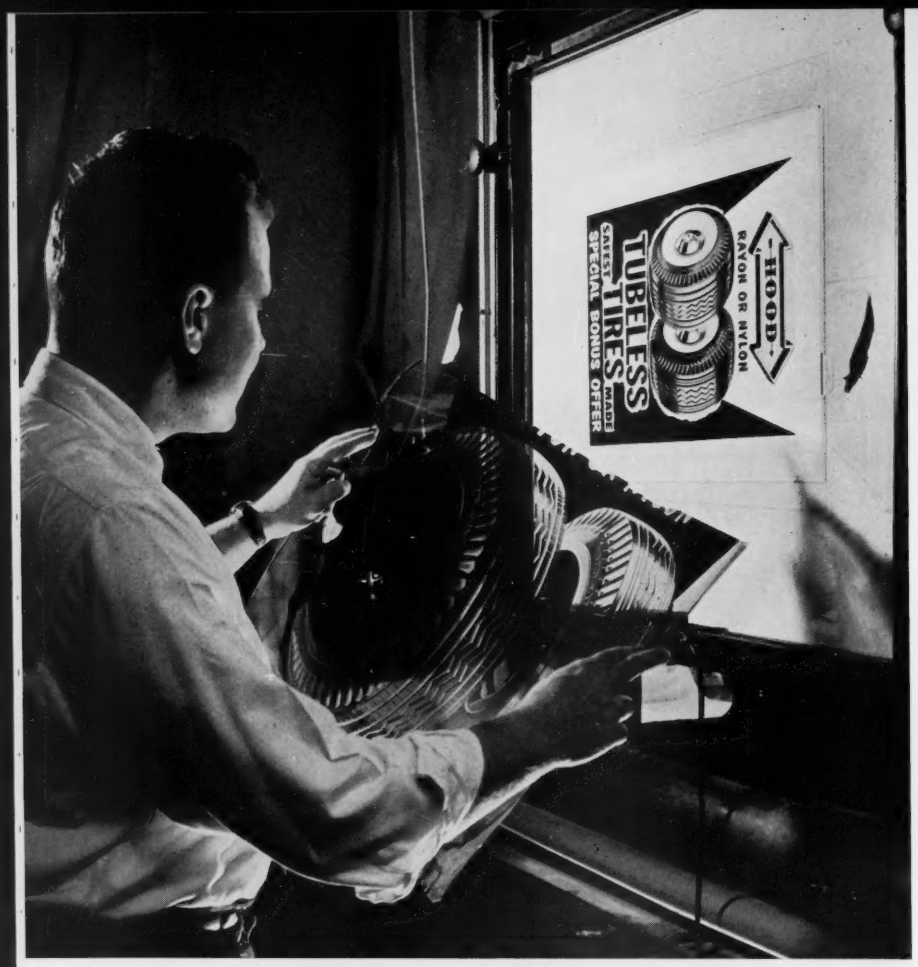

"Wonderful for picking up detail separation in shadow," says James T. Heier, cameraman, about "Photolith." "Not a single tire tread was lost in the low contrast area of this picture. And check those highlights . . . no trouble with dots veiling."

"'Photolith' digs deep into shadows . . . pulls out the dots!"

says James T. Heier, cameraman,
The Fine Arts Lithographing Company, Inc., Kansas City, Mo.

"We like the way 'Photolith' holds detail in highlights *and* shadows . . . and its etching properties are a big help in correcting color separations," reports Mr. Heier.

"But that's just part of the story," he continues. "We run almost every kind of job imaginable – catalogues, brochures, greeting cards, display signs, mailers – most of them in color. We must have a film we can depend on. 'Photolith' is just that. 'Photolith' lies flat . . . doesn't buckle and curl with weather changes. And its quick-drying properties save us time on every job."

If you're not already using Du Pont "Photolith" Lithographic Film in your plant, try it soon. You'll like its photographic quality, its ease of handling and the consistently good results it provides. E. I. du Pont de Nemours & Co. (Inc.), Photo Products Department, Wilmington 98, Delaware. In Canada: Du Pont Company of Canada Limited, Montreal.

"The wonderful etching qualities of 'Photolith' are important to us because of the amount of color work we do," says Vice-President Al Goller (right), looking over flat with Stripping Department Foreman, George Willman.

" 'Photolith' scribes without chipping," observes Mr. Goller. "It's always receptive to tape, won't curl or buckle in changing weather." Above: Richard Powers scribes positive.

" 'Photolith' has excellent dot-etching qualities on contact positives," reports Mr. Heier, (seated), looking over negatives with Du Pont representative R. H. Allen.

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BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

Editorial

LAST December members of the lithographic industry and other sections of the graphic arts were disturbed about a report of a manpower shortage threatening the industry. Issued by the Union Employers Section of Printing Industry of America, the report showed that the industry should be training one apprentice for every journeyman presently employed to maintain an equilibrium, without even accounting for expansion. The report went on to state that the graphic arts was far short of that minimum program—50 percent short, as a matter of fact.

The press and industry spokesmen in the intervening months have decried this situation, but, as far as we have seen and heard, no one has come forth with a really potent answer to the problem.

It is appropriate then, that the Public Printer of the United States last month came up with some really excellent material that could—and *should*—be used to lure young men and women into the graphic arts.

Raymond Blattenberger wasn't concerned primarily with the manpower situation when he addressed the Southern Graphic Arts Association at its convention in Hot Springs, Ark. His topic was "Printing is the Indispensable Art," with emphasis on the part Southern printers and lithographers play in the industry.

But in documenting this statement, the Public Printer presented data that could be used by the industry in its efforts to attract young people.

He declared, first, that printers need to be trained to appreciate the importance of the graphic arts and that users of the product have a right to be told "what we are doing for them." (What better groundwork for telling young people its values?) He went on to mention the manpower shortage, citing figures which showed that there will be 30,000 job opportunities in the litho field alone, this year, paying salaries up to $30,000. But who will land them? "Most of the higher-paid jobs will go begging because there are not enough trained personnel to fill them."

All right then. How can the industry attract young people? Here's Mr. Blattenberger's description of its attractions:

> "The industry offers a wide choice of employment to its 750,000 workers. Its employees actually can work at one of many trades; the industry can utilize almost any kind of talent. Jobs are to be found everywhere—in the smallest towns and in the biggest cities. The wage is averagely, the highest of all industries. Printing is a five-billion-dollar-a-year business. It can be a gateway to any of the other businesses and professions which are either closely related to it or dependent upon it for service."

Wouldn't these statements make the nucleus for a wonderful promotion piece, aimed at high school graduates? The industry already is telling young people about the industry, but the voice is weak and ineffectual, as reflected by the impending shortage.

Booklets, films and broadsides carrying this message to the schools could go a long way toward influencing young people when they are choosing their careers. It's something for your company and your trade organization to think about for the coming school year.

Slit Lens Stop

- ***How To Make One***
- ***How To Use It***

By Frank E. Besaw

EFFECTS such as the one shown at left can be achieved by any cameraman with a little time and patience for making a slit lens stop and experimenting with it. Illustrations with the tones composed of *lines* of varying thickness to determine the strength of the tones — instead of *halftone dots* — go well on large posters and other advertising pieces, because a "poster" effect is attained with the coarseness of the lines, solid black shadows and pure white highlights.

The writer has not seen any previous articles or instructions dealing with the manufacture or operation of a slit lens stop (although a stop of this type was thought of many years ago) and therefore presumes that there are a great many cameramen in the country who have not had the opportunity to gain knowledge in that field.

With that in mind, instructions are presented here for making a slit lens stop from materials at hand, and the actual steps in the procedure of using it in recording tones in the form of lines, for reproduction by offset.

To the uninitiated, the lines may appear to be very cleverly, painstakingly hand-drawn—instead of made photomechanically.

1. How to Make a Lens Stop:

The slit in the slit lens stop may be about 1/16 inch in width, and long enough so that the ends are covered by the iris aperture when it is opened to the largest size openings that will be used for this process. For the accompanying illustration an f.11 2/3 (f.11c) opening was the largest used (for making the highlight exposure). The stop can be made from a piece of an old line negative, or from an opaque film made by exposing it to bright light.

Before making a lens stop from the film, however, it may be desirable to make a paper pattern. Cut a strip of white paper wide enough to fit in the slot of the lens and long enough to protrude from the top several inches. With scissors, round off the bottom end of the

Striking effect obtained by using an easily made slit lens stop in the camera. This illustration shows finished results after following the procedure outlined through step 2b of the section on "Making Second Negative."

Photo used as copy for making negatives and final print shown on first page. Slit lens stop is used frequently by author Besaw at Salvatorian Fathers Publishing Department, Manitowoc, Wis., where he is a cameraman. Negative is first shot through 85-line screen.

paper to fit the shape of inside bottom of lens barrel. As the paper rests in the slot, calculate where a straight line would be on the paper — a line passing through the center of the lens and at a 45 degree angle to the floor (which should make it extend in the same direction as the crosslines of the halftone screen).

Remove paper from the lens and draw lightly a line which you think is in proper position. Replace in lens, and keep trying, making new marks on the paper until successful. Close aperture to f.90, and with camera lights on, look through bellows from back of camera and note whether the line crosses through the center of the opening. Set lens aperture at f.11 and mentally compute how long the line must be to extend from edge to edge of the f.11 opening. Remove paper and make marks at points on line just outside of limits of f.11 stop. Draw two lines parallel to, and one on each side of the line which runs through center of lens, extending the diameter of the f.11 stop. Each of these two lines should be 1/32 inch from center line, which puts them 1/16 inch apart.

Cut along these two lines with a sharp blade, cut off ends and the slit is made. Tape this pattern to a piece of blackened film. Scratch marks at corners of slit, and scratch the outline of the stop. With sharp blade cut out the slit, and with scissors cut along the outline of the stop. The top end of the slit stop probably will obscure view of the number on lens ring when the number is opposite the white mark on top of lens barrel. To remedy this, cut away a

corner of the stop in somewhat the manner shown in the illustration.

With slit lens stop in the lens, close down the aperture to f.90. If slit is centered, the aperture should look something like the one at left.

If *not* centered, the aperture may look something like the one at right.

2. Using the Slit Lens Stop

A. Making the First Negative

With the 85-line halftone screen in screenholder of camera, set the screen separation at 26/64 inch. Place copy (photograph) on copyboard. Set the camera for focus at a size which will allow you to enlarge the image to 1½ times in a later operation. (In other words, first negative should be 2/3 of final desired size.) For example: In one case the photo used was 8 inches high, and final size of image was desired to be 12 inches high. Therefore, negative was shot at same size in the first operation. (In Step B(1) below, the already "screened" image was enlarged 1½ times to bring about an increase in the coarseness of the screen from 85 to 55 lines per inch).

Insert slit lens stop in lens. Replace lens cap. Place film (Kodalith Ortho Type 2 DuPont or Ansco) on film holder, and proceed to set lens aperture for first exposure. If two 35 amp. arc lamps are used as illumination, the following exposure times are suggested, at the designated lens apertures:

Aperture	*Time*
f.11 2/3 (f.11*c*)	3 Min.
f.22	2½ Min.
f.45	2 Min.
f.64 ½ (f.64*b*)	40 Sec.

FLASH exposure with white card covering photo on copyboard.

Develop the exposed film in developer at 68 degrees F. until by inspection it can be seen that some of the highlights are closed up or nearly so, and shadow areas have real thin black lines. (These are highlight *lines, not dots;* the slit aperture has

caused lines of varying thickness to form the image instead of dots.)

If some small areas representing the darkest shadows in the photo are totally transparent—without lines—this may not be objectionable in some cases, and may even be desirable to give solid shadows in final reproduction.

Put film through short-stop bath, then allow to fix and harden in the fixer for usual time. Wash and dry the negative. If image is to be outlined, it may be outlined with opaque on the negative. Red masking paper may be used to block out the larger areas. Or if one wants to let the outlining go at this stage and outline with chinese white on a subsequent print, that is all right too.

Make a contact print from this negative on F-2 or F-3 AZO paper, using exposure and developing time that will render the black lines very black and the white spaces between the lines pure white. In other words, high contrast consistent with rendering the lines not over-bold or not too thin. Fix, wash and dry the print.

B. Making Second Negative

1. Place the contact print on the copyboard. Remove slit lens stop and halftone screen from camera. Set the camera for 1½ size enlargement. Place film on film holder and shoot as a line negative. Develop, fix and wash negative.

2. *a.* This negative can be stripped on to the main line negative of the job for which it is intended, or

b. A contact print made from this negative can be tipped on pasteup of job on which it will be used. More highlights can be added with chinese white. Additional shadows can be painted in with india ink. Zipatone or similar shading sheets of desired patterns can be placed on background or in some predetermined areas which have already been made white by opaquing on the negative, thus adding another type of tone.

This procedure of making a line enlargement of 1½ times from the screened negative achieves an image in which there are about 55 lines (not dots) per inch instead of 85. If you want still coarser lines, say about 44 lines per inch, the image should be enlarged to double size in step B 1, in which case the first negative would have to be ½ (instead of 2/3) of preferred final size.

Double Size

Another point of interest: You can obtain an illustration about twice as large as the halftone screen. If you have a small halftone screen, say 10″x12″, the image size on the first negative can be almost 12 inches long. Then, in step B 1, the image can be enlarged to about 18 inches (at 1½ times enlargement), or to about 24 inches (at double size enlargement), resulting in an image much larger than the halftone screen capacity.

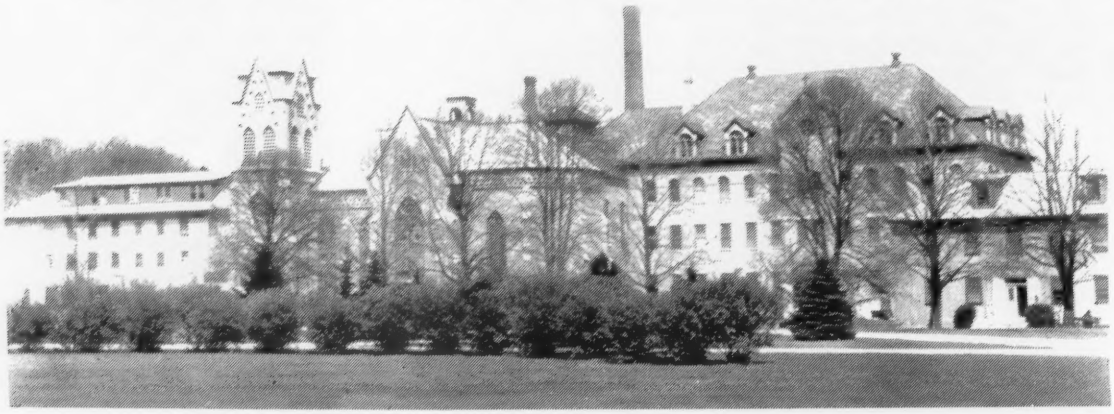
If a very coarse screen is available, say 55 lines per inch, and the cameraman considers that ruling coarse enough, it would not be necessary to proceed with Step B, because the first negative can be the *final* negative. The image would have to be shot to final desired size instead of 2/3 reduction (from final size). Screen separation, apertures and exposure times would have to be changed accordingly.

If you want the lines to run at right angles to those in the illustration, turn the photo on the copyboard halfway around (180 degrees). If the preference is that the lines run horizontally *across* the image, turn photo to a 45 degree angle from the vertical so that top and bottom of photo extend in the same direction as the slit in the stop. To make the lines vertical on the image, turn the photo so that left and right sides extend in the same direction as the slit. The choice of angle of the lines may make an appreciable difference in the effectiveness of rendition of some subjects.

Permanent Stop

Make several negatives through the slit lens stop — getting acquainted with its use, exposure times, effectiveness of various sized apertures, etc. Then, if you think that a wider slit would be more efficient for your conditions, it would be worthwhile to experiment with one. When you are satisfied that the stop is of the most practical design as regards width and position of slit, and overall shape and size so that it fits snugly in the lens, take it to a metal working shop and use it as the pattern for a durable one made of sheet metal for years of service.★

Another subject treated with the slit lens stop by the author. Thisis result described under "Making First Negative."



How to get accurate

Print Length

with true rolling

By Albert T. Kuehn

Miehle Printing Press and Mfg. Co.

ACCURATE print length is required on many printed items. Cartons, bank forms, maps, labels and ruled layout sheets are some examples. The printing on these items must register with acccurately made dies, posting machines or operations where extreme accuracy is required.

The accuracy required on these items differs from that required on book printing, brochures, etc., where it is only necessary for all colors to register with each other, dot for dot and line for line. The over-all print length need only be reasonably correct. Variations in print length of 1/32″ to 3/32″ on a sheet 52″ long usually are acceptable.

Plate makers and pressmen often are puzzled about the length of the printed image. It usually is longer than the image on the flat plate. "My press prints long" is a common remark of the pressman when he checks a printed sheet with the image on the press plate, when it is flat.

Simplified Make Ready

A plate maker who knows the reasons why and exactly how much an image on a plate lengthens can make a plate so that it will print the exact length of the image required. The pressman then merely packs the plate to the true rolling method of packing, and the press prints the true image length.

This simplified method eliminates the usual trial and error method, where packing is changed after a trial sheet is printed, and where the quality of the print suffers when it is necessary to change too much packing to get the required print length.

1. Plate Growth Caused by Curvature

Print Length Variables

When a plate is curved around a plate cylinder, the image on the plate grows in length and becomes longer than it was when flat. An allowance can be made for this growth by the plate maker when stepping on a step and repeat machine, or when stripping images on a layout sheet. For practical purposes, the allowance is .0015 per inch for press plates up to .015″ thick and .002 per inch for plates .016 to .022″ thick, for any plate cylinder diameter.

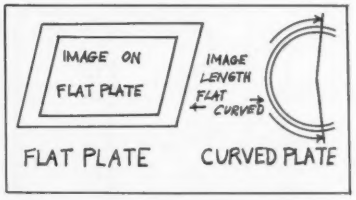


Fig. 1. Plate Growth Caused By Curvature

Example (See Fig. 2): Required printed image length = 32″ (.012 plate), 32 x .0015 = .048 (total allowance) 32.000. Printed image length —.048 Growth allowance = 31.952 Image length when flat.

Example: Required printed image length = 32″ (.020 plate) 32 x .002 = .064 allowance. 32.000″ printed image length —.064 Growth allowance = 31.936 Image when flat.

2. Plate Stretch When Mounting Plate on Cylinder

Pressman must carefully tighten the plate on the plate cylinder. Most plates stretch with the slightest overpressure on the tightening wrench. It has been found that some pressmen have stretched plates 1/16″ to 1/8″ by tightening, without realizing that they were stretching the plate.

Plate stretch caused by mounting the plate on the cylinder can be corrected by loosening the tail end tightening screws. This allows the plate to return to its unstretched length. The tightening screws then are tightened to hold the plate firmly against the cylinder without stretching it.

3. Printing Pressures and Cylinder Packing

Printing Pressures

Normal printing pressure should not exceed .004. Excessive printing pressures stretch the printed image and may permanently stretch the printed sheet. Measuring a blanket and packing incorrectly with a micrometer usually accounts for excess printing pressure of from .002″ to .004″. A good check to determine if printing pressure is correct is to remove a .004 packing sheet from under the blanket after make-ready is complete. If the print does not transfer to the blanket or to the sheet passing through the press, the printing pressure is correct, because it does not exceed .004. Replace the .004 sheet after checking.

Cylinder Packing

Removing packing from under the blanket and placing it under the plate shortens the print length. To increase the print length, packing is removed from under the plate and placed under the blanket. When making a change in cylinder packing, it is necessary to readjust the impres-

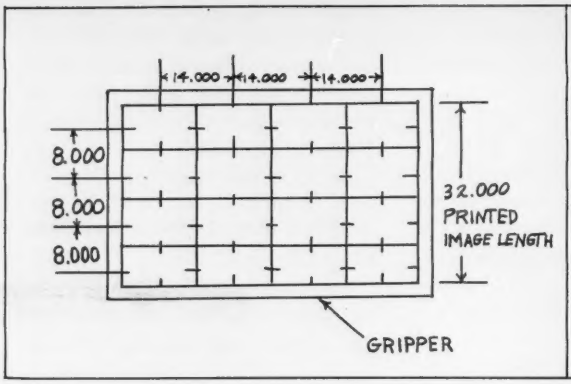


Fig. 2. Sheet Layout

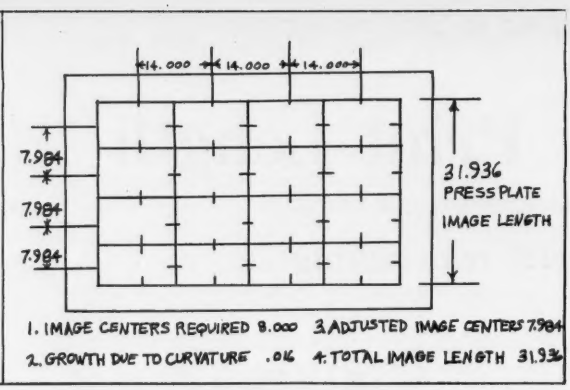


Fig. 3. Press Plate Layout

sion pressure so that a maximum pressure of .004 is not exceeded.

Each .002 change in packing under the plate changes the print length about 1/64", under normal conditions of pressure.

The True Rolling Method of Cylinder Packing (U.S. Patent No. 2,036,835) provides a true rolling contact at the printing line, between the plate and the blanket and between the blanket and the paper on the impression cylinder. It eliminates the "Battle of the Bulges" caused by untrue rolling. One of its seven advantages is that accurate print length is maintained on paper or board. Another advantage is elimination of "long" printing and "tail fanning" of the image. The true rolling contact eliminates paper stretching forces.

The packing for different cylinder diameters in this method is as follows:

Cyl. Dia.	*Plate Cyl.*	*Blanket Cyl.*	*Imp. Cyl. Ground*
20"	.010(A)	.006(B)	.010(A)
16½"	.009(A)	.005(B)	.009(A)
15"	.008(A)	.004(B)	.008(A)
12"	.007(A)	.003(B)	.007(A)
6"	.004(A)	Bearer High	.004(A)

(A)—Above Bearers (B)—Below Bearers

4. Paper Stretch or Shrink

Paper may stretch or shrink between printings on multi-color work. Packing is provided under the blanket or plate to take care of this variable. Paper conditioning before going to press, during its time through the press and after printing will assure a minimum change in the length of the sheet or the printed image. Keeping paper covered and other precautions should be observed to maintain proper moisture balance.

Carton Printing

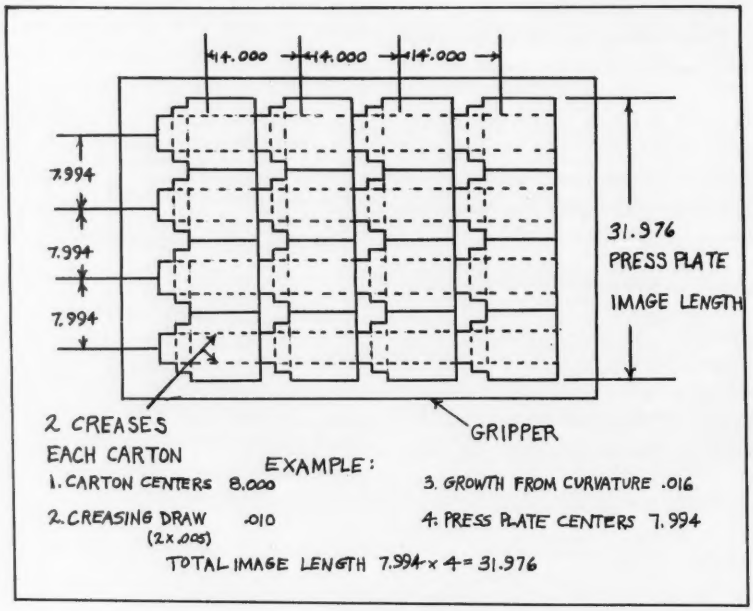
Accurate print length is maintained on thin paper or heavy cardboard on offset presses with true rolling. The effective radius of the impression cylinder is not changed with different paper thickness, therefore, the print length is not changed when printing on any thickness of paper or board. This is a great advantage in the carton industry. It is possible to print any desired length of image for a multiple carton layout with single or double knife on plain or nested cartons, with the simple true rolling packing method.

Carton Production Variables

Although there are many variables in the paper board material, the cutting dies, the counter thickness, and the cutting and creasing press make-ready, all can be controlled. The draw of the sheet caused by creasing can be measured in the direction with the grain and across the grain. A general rule for the press plate layout is to allow a draw of .005 for each crease in the grain direction (around the cylinder) on stock up to .030 thick, and .008 on stock over

(*Continued on Page* 115)

Fig. 4. Press Plate Layout for Cartons: 3 Steps



ML Special Series: Part 4

Paper for Offset

How Waste Paper Can Work for You

by Ralph W. Kumler

THERE are a number of reasons why your paper waste deserves your attention:

1) Under most circumstances it is a source of direct revenue.

2) It constitutes a low cost raw material for the paper industry, which makes for lower priced paper and paperboard.

3) Careless inclusion of objectionable adhesives in the waste has been known to circulate through the paper mill and came back in new paper supply to plague the lithographer.

4) The reuse of waste paper is in accord with the general principle of conservation of our resources.

During World War II wood-pulp was in short supply and at that time a patriotic appeal was made to save waste papers. The response was startling and, for a time, supply exceeded demand. In 1944, at the height of the campaign, 36.6 percent of the fibrous raw material used in the manufacture of paper and paperboard was waste paper. Since that time the ratio of the consumption of waste paper has been declining. By 1953 the consumption had dropped to 30 percent of the total fibers used and it declined still further in 1954. In 1951 volume of waste paper reached an all-time peak—a little over 9 million tons, but in 1954 consumption was about 8 million tons.

In the opinion of close observers of the situation the decline has been due to a large extent to non-paper trouble-causing materials.

Making the Paper

In producing pulp the tree must be cut down in the forest, transported to the pulp mill, barked, chipped and cooked in a digester. Commonly used woods consist of 50 to 60 percent cellulose fibers, which are cemented together with lignin and various carbohydrate materials, which are not cellulose but are chemically related to it. To make strong papers, it is necessary to dissolve the cementing materials with chemicals and wash them out. If white papers are to be made, a bleaching step is necessary, further reducing the yield of pulp, which is then ready for papermaking.

The first step in the manufacture of paper is the beating of the pulp which consists of rubbing the fibers between metal bars so as to break the primary fiber wall and to loosen and fray the twine windings in the secondary wall. This produces fibrils which protrude from the body of the fiber and although many are too small to be seen by the naked eye they play an important part in the manufacture of paper.

The principle of capillary attraction is familiar to everyone and is often demonstrated by the rise of water in a glass tube. However, while the glass is pulling the water up, the water is also tending to pull the glass together. When cellulose fibers are matted together and the water is drawn out or evaporated, the removal of the water tends to pull the fibers together more closely. In the passage

Suggestions for Lithographers

- **Consult closely with your paper stock dealer. The Waste Paper Institute has done a good job of setting up standard grades of waste paper (leaflet WP-54).**
- **Delegate responsibility for tagging paper as it comes into the plant to someone and see that the waste material goes into the proper grade.**
- **Provide adequate number of trash cans for grading or trash will go into the waste paper. Signs indicating what each receptacle is for should be posted.**
- **No system will be effective without proper morale and spirit. Management must set the policy and make the purpose clear to members of the company.**

Writer, author, lecturer, teller of tales, Ralph Kumler was consultant with Foster D. Snell most recently, and technical director of American Cyanamid's Paper Chemicals department, for 16 years prior to that before taking his present post as director of Waste Paper Utilization Council.

of the paper over the paper machine dryers, this force causes a definite shrinkage to take place in the width of the sheet as it is being dried. This serves to bring the fibers very close to each other so that other forces of attraction can come into play, such as strong hydrogen bonding. If you have wondered why it is possible to make exceedingly strong and tough paper with fibers so short that it would seem impossible to make them hang together, here is a clue to the answer. Paper formed in liquids other than water does not develop this strength because the shrinkage force of the water is lacking.

Waste paper is collected mostly from cities, *not* from forests. It has already been pulped and beaten so that fibrillation has already been provided. Thus the reuse of waste paper saves substantially in manpower and raw materials. Chemicals are required to produce pulp, which are not necessary for waste paper unless it is to undergo a deinking process. There are, however, disadvantages to the use of some waste paper arising mostly from the presence of objectionable materials. In order to adapt papers to the variety of uses demanded, it is necessary to apply coatings and chemical treatments. These additives have been responsible in a large measure for the tremendous growth of the paper industry and for the increase in the supply of waste paper and the demand for its use. Nevertheless, most of the additives create problems when the paper is reused.

Non-Paper Additives

Means have been devised for handling many of the additives; however, the consumer must know of their existence in advance. For instance, it is not difficult to reclaim wet strength paper if it is recognized and segregated. Even asphalt-impregnated papers can be used when their presence is known in advance. When several of these problem children appear unexpectedly in the same bale of paper, the consumer is in trouble!

A decline in the reuse of waste paper would mean loss of revenue for the printer and converter, an increase in the cost of paper and paperboard —probably a shortage—and a serious drain on our forests.

To meet the problem of waste paper consumers, the Waste Paper Utilization Council was set up a little more than two years ago, sponsored by consumers and dealers in paper stock. It performs a number of functions, such as:

1. Whenever a new product appears that causes trouble or looks as though it might do so, all members are alerted, and such material is discarded if necessary.

2. Problems are discussed with the manufacturers of chemicals or the converters of paper in an effort either to modify objectionable material to render it harmless or to make sure that it is withheld from waste paper distribution channels.

3. Information is collected and distributed regarding methods of detection of objectionable materials and of coping with them in commercial production.

4. An information service is being worked out for supplying printers and converters with information regarding collection and grading of waste paper. The Council office at 122 East 42nd St., New York, is always available for discussion of these problems which come to it from many different quarters.

Grade Waste for Better Value

It is financially advantageous for lithographers to use the utmost care in grading their waste and keeping trash and all other objectionable materials out. In some of the larger plants the revenue from the waste paper is a very important factor in the company's earnings. The value of waste depends on:

a) Kind of paper being used. Long, strong fibers are of greatest value, particularly if they are bleached.

b) Volume of paper. Cost of collection of a grade of paper will decrease as its volume increases and, therefore, enhance its value.

c) Location of the lithographer. If the plant producing the waste paper is in proximity to other producing plants, the collector would have favorable costs and could afford to pay a good price.

d) Proximity to waste paper consumers.

e) Care in grading and elimination of "Prohibited Materials," as they are defined in publications of the Council.

Council Educates Paper Users

It is point (e) that is most subject to control. If papers are properly graded and kept free of trash they may be worth many times as much as if little or no care is exercised. There is a definite lack of awarness of the problems of the waste paper industry on the part of some individuals who are in a postion to help solve or aggravate the problems. The Waste Paper Utilization Council strives to make sure that all personnel who should consider these things and act accordingly are kept informed.★

A Mechanical Method of Registering For Lithographic Reproduction

By Eastman Kodak Co.
Rochester, N. Y.

THERE are many potential applications in the graphic arts for mechanical methods of achieving perfect register. The methods in common use such as blue key, optical tables, etc. not only are time-consuming but comparatively inaccurate because they depend upon the vision of the operator. It is not likely that mechanical methods will supersede all visual register techniques, but even if adopted for a large percentage of applications where visual methods are now used, the net gain in time and in accuracy would more than repay the initial expense and effort entailed in establishing a mechanical system.

It can be argued that a mechanical system is inflexible and does not lend itself to complex layouts such as those used in advertising and many other kinds of work. However, in the development of short-run color printing processes, it was recognized that conventional methods of register would be more time-consuming than all of the other operations in the process. Consequently, accurate punches were mounted in the camera and fixed in position with reference to the projected image. Red, green and blue screen separation negatives were punched individually at the time the exposure was made. Printing plates then were made from these negatives using retractable pins mounted in a special printing frame. The plates were punched with a round and a slotted hole along one end and attached to a corresponding bar mounted on the plate cylinder of a Multilith 1250 Duplicator. At the present time several jobs can be run without a single adjustment for register.

Two Types of Pins

Two types of punch holes and pins are used: 1. the round and slotted holes punched in the camera film and 2. three elongated holes in the printing plate, made with the Kodak Matrix Punch, that are substantially larger than the ones used on the camera. The camera negative is placed in position on a vacuum printing frame by means of retractable pins, then secured by evacuation of the channels surrounding the aperture. When the frame is closed against the printing plate, the register pins are pushed into a recess against light springs so that they will not deform the printing plate.

The printing plate is punched on one end with the Kodak Matrix Punch and a bar containing three corresponding matrix pins is mounted on the press cylinder. The end of the plate is slipped onto the pins, the bar is clamped and the plate wrapped around the cylinder in the usual way, being attached at the far end with the regular perforating holder. Successive plates, as in color printing, can be located on the press by this means to produce excellent registration of the successive color images.

For Complete Jobs

Mechanical register systems can be used in complex layout jobs, e.g. the combination of a number of different color negatives into a single layout. The usual blue key method has been replaced by the following procedure:

A vinylite sheet with very thin, wafer-like register pins mounted in the vinylite reduces the labor and at the same time improves the register quality of reproductions made on a 17 x 22 Harris press. Consequently, the substitution of one color negative for another on a given flat can be made in a matter of a few minutes. For this purpose 0.010-inch rigid vinylite matte, press-polished on one side, is used. The layout is made in pencil on the matte side with center lines for the punched holes included. A special punch with a retractable center is used for positioning and punching. This should be done as carefully as possible even though registration does not depend on this operation, but position of the picture does. The pins next are mounted in the holes using Scotch tape and the masks defining picture borders taped into position on the vinylite sheet.

Ready for Use

The layout now is ready for use. Each negative is positioned between two register pins and can be held in position by using a short length of double-sided Scotch tape between the two pins. In those cases where pictures are to be butted together or positioned so close as to preclude the use of register pins in a single flat, two flats are made alternating the negative positions. This, of course, requires two exposures for each printing plate but does permit the use of negatives without trimming and without overlap. The two flats in turn are punched to index exactly on the plate.★

Young German Lithographer

By Mildred Weiler

St. Louis Correspondent

WHEN Wolf-Dieter Hildebrandt, of Hamburg, Germany visited 40 offset printing plants in the United States last year, he found lithographic processes more advanced than in his native land.

Ironic as that may seem, when one recalls that lithography came into being in Germany, "Brandy" as Herr Hildebrandt is called, says he learned a lot from the United States lithographic plants that he can use in his own plant. Of particular value to him was information he gained on copperized aluminum plates, densitometry, masking, projection on coated plates, air conditioning, special machines and he says, "the good advice and tips he got from craftsmen and workers themselves."

Production Manager

The visitor is production manager and co-owner, with his father, of Graphische Kunstanstalt Schultz, GMBH, (Graphic Arts Printing Co., Schultz Ltd.). He said his company, one of three large litho plants in Hamburg, was founded in 1892 by H. A. J. Schultz, who then, of course, printed from stones. Later he took his son into the business and modernized the plant completely. When both Schultz and his son died, Dr. George Hildebrandt and his son ("Brandy") took over the company in 1932.

Brandy made his 20-state tour in a 1941 Plymouth which he bought in Los Angeles and drove East after a plane trip West to the coast. Summarizing his reactions, he said he is convinced that the United States leads in photo materials and processes, particularly color photography and inks, and hopes to be able to work with American inks and papers.

"Even cheap advertisements," he said, "are printed on good quality paper in your country. We cannot do

◀ **Pretty girls** make good copy for offset, whatever the country. These attractive reproductions, enhanced by four-color lithography at "Brandy's" plant, were used for hairdo ads.

▼ **Samples** of some of the fancy diecut work in four and five colors, with varnish, produced at the German plant. Register and fidelity were especially fine on samples.

er Visits 40 Offset Plants in U.S., Praises Work

so because it would be too expensive, and that is the reason why we have more trouble at the press than you have."

Paper Consumption

Paper consumption in the United States, by the way, is three times bigger than in Germany, according to "Brandy," and the size of lithographic equipment such as plates, whirlers, vacuum frames, repeat machines and cutters is smaller in Germany.

When it comes to equipment, the German lithographer finds it hard to make a comparison because such firms as Hoh & Hahne, Klimsch, and Faber & Schleicher are known in both countries. He found many German machines in use in the United States, particularly cameras from Klimsch and offset presses from Faber & Schleicher.

The tour was arranged by Henry Henneberg of Printing Industries Association of Los Angeles (but financed by Brandy's own company). "Brandy" who is a likeable, friendly chap, made friends in St. Louis through the Associated Printers & Lithographers of St. Louis. He is of the opinion that good, medium and bad printing plants exist both in the United States and Germany, but with all our technical advantages, modern equipment and well educated craftsmen he found our printing quality "somewhat disappointing." He says the "disappointing quality considering all the possibilities for perfection we have here," is due, in his opinion, to the fact we sacrifice thoroughness for speed. "In Hamburg they take it easy, run presses slower in favor of quality," he stated. Obviously, labor costs have a great deal to do with this differential.

German Equipment

The Graphische Kunstanstalt Schultz Co. makes its own plates, deep etch and bi-metal (Aller plates). It has two cameras (31,5" x 31,5" and 23,5" x 23,5"), eight Faber & Schleicher offset presses, five two color presses (40 x 55", 35 x 40", 24 x 33") and three one color presses (35 x 50", and two 24 x 33"). A four color press is on order and will be the fourth one erected in Western Germany.

The plant employs 250 people, including four artists, and specializes in advertising posters and brochures, folders, catalogs, calendars, set ups and die cut displays. A bindery employing about 100 handles all the work for the plant, including the various sets up and die cuts.

Few Publications

Publications by offset are the exception with the plant, which includes customers in cities and towns throughout Western Germany and some foreign countries. The company does not have a typesetting department.

Most of the work is in four and sometimes five and six colors. They are proud of the fact that their plant

(*Continued on Page* 113)

Here's "Brandy" (Wolf-Dieter Hildebrandt) at work at his desk. He is production manager and co-owner of the offset plant. Picture on wall is souvenir of his visit to the United States litho plants.

Graphische Kunstanstalt Schultz, G.M.B.H., consists of old six story building (at right), and new three story structure. Old building was rebuilt floor by floor after being bombed out in 1943 by Allies. New building is used for paper and cardboard storage only, according to Hildebrandt. **Inset:** Pressroom at the plant. It contains eight presses — three one-color, five two-color, with a four-color unit ordered. All made by Faber & Schleicher.

Getting the Most From Your Camera

By Bernard R. Halpern
Graphic Arts Consultant

THE word "camera" has various meanings, but we, as lithographers, are less concerned with the historical, legal, or amateur aspects of the word, and our normal response is to regard the camera as a basic tool in our industry.

The camera primarily is a unit of *productive machinery*, as much so as is a press, folder, cutter or photocomposer. We will want to keep this constantly in mind as we consider its characteristics and applications. We can definitely rule out any presumption that a camera is a temperamental, artistic implement requiring a magic blue haze, a secret inner sanctum, and ethereal or chemical spirits to provide the aura for its deliverance of aesthetic creations.

What It Is

Well, what exactly is a camera? A camera, specification wise, is a unit of equipment designed to reproduce photographically on wetplate, dryplate or film, an image of an original drawing, photograph, type impression, transparency or objects, to the degree of accuracy of definition and geometrical proportions necessary for the class of work for which it is intended. Cameras therefore can range in acceptability from a simple grouping of components suitable for office duplicating work to equipment built to the highest order of accuracy essential for maps, charts and templates. In between are a variety of standards and variations to accord with the requirements for the various fields of application.

Accuracy then, is an important word in our specification. What are the criteria of a camera's accuracy? Let us study this step by step, as we analyze the camera components.

Our first thoughts usually are directed to the *lens*. We all recognize that a good lens is essential, yet in many instances the lens is of a higher order of accuracy than the camera on which it is used.

Accuracy

Confining ourselves to the camera, we find that its accuracy is conditioned by its design, construction and manufacturing tolerances. This is not as simple as it seems, for straight rails by themselves may bow badly under the weight of the lens and copyboard carriages if the substructure is inadequate. Similarly the displacement of other masses such as swinging a vacuum back, or sliding a screen carriage may induce a shift of image because of structural distortion. A small variation with a short based carriage will be multiplied several times on large copy. All these conditions have a direct bearing on photographic image fidelity, as much so as the accuracy of the focusing system itself also determines the quality of the reproduction.

Mr. Halpern has operated cameras, written training books about them and designed them. That's why we think this thorough discussion of the subject, originally delivered at the February meeting of the Washington Litho Club, and later at the April meeting of the Philadelphia Litho Club, will be of interest to the cameraman as well as top management in your shop.

Along with the geometrical proportion factors, *vibration* ranks high as a cause of image deterioration. When you consider that the hairline strokes and serifs in many modern roman type faces may be only three or four thousandths of an inch in thickness, and then project them across six to twelve or more feet of space from copy to negative, you can readily appreciate what a little vibration in the camera can do to type character fidelity. And if you add distortion of the geometric planes, dispersion due to dust, air turbulence due to the heat of the arc lamps, and other factors, it is little wonder that in earlier years "lithography" and "muddy gray typography" were synonymous to the quality printer.

What About Vibration?

So, what can we do about vibration? Either the camera must be designed right to begin with, and be provided with an adequate structure and carefully computed vibration mounts or we must locate the camera in an isolated part of the plant. Failing that, we must resign ourselves to lower standards of definition.

A set of springs or four blocks of rubber may satisfy the advertising copywriter. However, adequate vibration mounts must take the weight distribution, impressed frequencies and their amplitudes, the natural or resonant frequencies of the components in relation to the supporting structure, and the dampening period and shock

absorption into consideration. One way "out" is to emulate the British Ordnance Survey which buried its truss structure in a huge block of concrete, but I doubt that many of us would be happy with a five ton block of concrete loading down our camera-room floor.

Let us digress for a moment to regard the camera from a purely scientific and engineering point of view. What we see is a span or bridge structure supporting several large components whose centers of mass are at different distances above or below the torque axis of the structure. If the supporting structure has been designed simply to support the movement of the components to a fairly straight line, we can meet our requirements for geometrical proportions. However if we introduce a sway or torque moment by vibration or other means, particularly at right angles to the torque axis, the external masses of copyboard, lensboard and camera back will start into motion, and if the structure is inadequate torque-wise, each member will oscillate to its own frequency. The result is a miniature version of the Tacoma Bridge Disaster as far as image detail is concerned.

The one dim gleam of hope under such conditions is that the maximum image vibration is around the torque axis and practically horizontal on the ground glass, and that type reproductions from faces designed with heavy vertical stems and light connecting hairlines, or with entirely heavy strokes such as the old style family might at least get by under such conditions.

Other Qualities

Yet accuracy of proportion and detail in themselves cannot alone qualify the camera. We also want efficiency, ease of handling, durability and adequate controls to standardize operation so that the negatives will be uniformly good without having to tax the ingenuity of the camera man to compensate in processing what he did not get in exposure. Let us consider some of the basic factors that contribute to a camera's efficiency.

1. Darkroom construction is a *must* for efficient production. There is little argument on this score in the lithographic industry.
2. An accurately calibrated focusing system is indispensable, not only as a time saver, but also because the human eye tires rapidly in focusing detail under dim light conditions, and unless focusing is effected in a number of locations to average out the best positions for the entire field of coverage, the detail may be sharp only in one zone of the image area.

"*What is a camera?* We can definitely rule out any presumption that a camera is a temperamental, artistic impliment requiring a magic blue haze and a secret inner sanctum . . ."

In addition, for critical work, visual focus may not always agree with photographic or "chemical" focus, particularly with some of the older lenses, and I have encountered situations with the longer focal length lenses where this difference amounted to over half an inch in lens position. Completely automatic focusing such as is available on the better enlargers may sound desirable, but the extended cam or other mechanisms needed have proved impractical and inaccurate in the few instances they have been tried, and it is further complicated where more than one lens must be used.

Rapid copyholding facilities need no discussion other than the choice between suction, vacuum and glass covered tilting. Arrangements favor the former for accuracy and quality, and the latter for speed in handling copy of various thicknesses.

The back of the camera, however, frequently is overlooked and underestimated for its contribution to good negative production. The ground glass, vacuum back and dryplate holder may not come into the same plane, so that a sharp image on the ground glass may be out-of-focus on the film itself. While thin base films alter the focal plane but little, the plane of the vacuum back should be compensated for the heavier films. It is also surprising how many vacuum backs in use today are badly bowed, dished or otherwise warped, so as not only to throw areas out of critical focus but also to provide dot structure variation as a result of the varying screen distance. Under these conditions, the contact screen sometimes affords the only way to obtain at least good halftone dot formation.

In addition to the basic camera components we have covered, facilities are required for specialized applications. These include three-point register, or other masking facilities for color correction, and reproduction and step-and-repeat backs for certain classes of stamp, metal printing, band and label work. Timers, lens controls and controlled uniformity of illumination also are necessary additions that contribute to camera efficiency. But, beyond that, we must observe some caution and keep our minds in focus so that elaborate panels with flashing lights, rocket styling, and gaudy colors that doll up the camera so that it looks like a Christmas tree or a Hollywood version of an interplanetary space ship, do not veer us off from the fundamental qualities we have covered.

Actual Conditions

So far we have a fairly rough conception of the general requirements of a camera. Now let us step into some plants and see the actual conditions under which they operate. If your ears and sensibilities aren't too hardened by experience, you will become aware of the hum and vibration of machinery, the flashing of lights, the sudden bump of a cutter or baler, the clatter of a skid of paper and perhaps even a gentle swaying of the building itself thanks to a battery of cylinder presses.★

The operator can shrug his shoulders and get along with his work as best he can, or he can save the more exacting jobs for overtime when the other equipment is shut down, if both he and management are agreeable. The obvious thing for him to do is to ask for a new and better camera; but frequently a long period intervenes between the asking and the actual procurement. In the meantime, if he has the time, or better yet, if the plant has a good machinist or a competent camera erector, the situation frequently can be improved to provide better negatives in the interim.

Conditions Needed

Some of the conditions that he can strive for are the following:

1. Complete isolation, or free floating of the camera structure. If the camera touches the darkroom wall, or the spring suspension rods touch the side of the upper clearance plate in any position of the copyboard and lensboard or camera back, such contact is a natural direct line for vibration transmission, and is one that can be easily remedied.
2. Correct designs of springs. If the springs are incorrectly designed, or the vibration mounts incorrectly rated, the vibration may be transmitted through them. This can usually be detected optically or by a light finger touch on any portion of the floating structure, comparing the sensation with that felt in the legs or darkroom wall. Or, better yet, a 25 or 40x microscope can be attached to the ground glass and focused on the image of halftone copy or a repro proof to determine readily the extent of the vibration. Rectification of a condition in which vibration is transmitted through the springs or mounts is entirely possible but not as easily accomplished because it will require a careful study of the conditions, and calculations to choose a set of mounts that will be satisfactory. If in addition the basic camera structure is flimsy, emphasis definitely should be directed to camera replacement.
3. Reduce movement of personnel near the camera. Passage of others through the light trap during exposure and opening and closing of darkroom doors can result in air surges that will wiggle the lensboard through the bellows opening. Where such movement of personnel is necessary, the use of large light-baffle ventilators in the darkroom wall, or the open entry through an "S" shaped maze is helpful.

Regular Testing

Tests for camera accuracy should be an annual or semi-annual event. To facilitate camera testing, some standard test equipment always should be available. This should include the following equipment:

1. A 20 or 30 power microscope with a wide base or suction cup on the legs so that it can be attached to the ground glass and not permit the operator to exert a varying pressure on the ground glass or move the microscope during observation.
2. A pair of accurate grid charts. The Army uses identical prints of a cross section grid on the ground glass and on a metal based copy for testing their map reproduction cameras. Such an arrangement can be used to check accuracy through most of the reproduction range.
3. A rigid straight edge with a ground or scraped-in reference edge, of a size corresponding to the vacuum back. Such a straight edge can be used on the copyboard, rails and other

(*Continued on Page* 119)

How To Choose A Camera

If you are given the green light to get a new camera, how should you go about choosing one? There are many things to be considered, of course, and you shouldn't be fooled by appearances, warns author Halpern. Here's his recommended procedure:

1. List the range and capacity of work to be done and try to project it into the immediate future if any changes are anticipated.
2. Consider what quality and accuracy standards will be in keeping with the class of work you are doing.
3. Study your plant conditions in the immediate environment to determine how serious the vibration factor is. If conditions are very bad, this is an opportunity to try to relocate the camera department elsewhere, for even the best of commercial cameras will show some of the effects of vibration.
4. Unless there are great extremes in ratios of enlargement or reduction, try to put a little extra money into getting one good lens with a diaphragm control, rather than alternating between several indifferent lenses, even if it may mean choosing a camera bed a few feet longer, so you can cover your normal range with one lens.
5. List also the other things that will contribute to the camera's efficiency and accuracy.
6. Get data on all possible cameras. Compare each one with your requirements and narrow down the field until you have two or three that come close to what you need. At this point you should appreciate that a standard camera costs less and usually is better than one modified to meet a particular specification and that the "ideal" camera usually is economically unobtainable.
7. From here on you may have to reach a compromise with some of your listed requirements but once your accuracy and quality of definition values are established you should never compromise with them.

Predict Bright Future for Litho in South

LITHOGRAPHY and other phases of the graphic arts can look forward to a profitable future, according to speakers at the 34th annual convention of the Southern Graphic Arts Association. The group met May 26-27 in the Arlington Hotel, Hot Springs, Ark.

Raymond Blattenberger, public printer of the United States, put it this way in his banquet address:

"What of the long-range future of printing? Prospects were never brighter. In its growth, the printing industry has far outdistanced nearly all other trades and professions, and also has grown very much faster than the rate of population increase. In the lithographic branch, recent growth has been even more phenomenal."

Elected to head the SGAA for the coming year was R. G. Graham, of Parthenon Press, Nashville, Tenn., who was moved up from vice president. Other officers named at the convention are J. Tom Morgan, Litho-Krome Co., Columbus, Ga., first vice president; A. A. Wade, S. B. Newman Printing Co., Knoxville, Tenn., second vice president; and Charles E. Kennedy, of Nashville, reelected secretary-treasurer.

Raymond Blattenberger

". . . printers themselves need to be trained to appreciate the importance of the graphic arts, and users of our product have a right to be told what we are doing for them."

Other speakers reinforced Mr. Blattenberger's bright forecast for the graphic arts in talks covering other aspects of the industry. William H. Walling, chairman of the board of Rogers - Kellogg - Stillson, New York, and president of Printing Industry of America, spoke on "What Should the Printer Do With His Money — A Look at the Depreciation Reserves."

"An Employe Looks at His Job" was the topic aired by Harold S. Hutchinson, of Mack Printing Co., president of the Master Printers Section, PIA. John H. Doesburg, secretary of the Master Printers Section, gave a talk entitled "You Can't Let George Do It." In another address, Wade E. Griswold, executive director of the Lithographic Technical Foundation, spoke on three-color production and substitute methods for preparing color separations.

Newly elected members of the board of directors are Julius E. Curley, Curley Printing Co., Nashville, and Robert G. Griffin, Courier-Journal Lithographing Co., Nashville.

Litho winners in the Exhibit of Southern Printing, held concurrently, are listed below.★

Western Lithograph Leads Offset in Exhibit

O. E. Wells, center, president of Western Lithograph Co., Wichita, Kan., is congratulated for the Grand Award his company won by John C. Henley III, left, immediate past president of SGAA, and William H. Walling, president of Printing Industry of America.

Southern Litho Winners

Western Lithograph Co., Wichita, Kans. (*Grand Award, 13 first place awards, 13 second place awards*)

Courier Journal Lithographing Co., Louisville (*three firsts, four seconds*)

Democrat Printing & Lithographing Co., Little Rock, Ark. (*two firsts, four seconds*)

Brandau-Craig-Dickerson Co., Nashville, Tenn. (*one first*)

Brunner Printing Co., Memphis, Tenn. (*one first*)

Paragon Press, Montgomery, Ala. (*one first, one second*)

Litho-Krome Co., Columbus, Ga. (*three firsts, two seconds*)

Fetter Printing Co., Louisville, Ky. (*one first, three seconds*)

The Clegg Co., San Antonio, Texas (*one first*)

The Egan Printing Co., Dallas (*three firsts, two seconds*)

Robinsons', Orlando, Florida (*two firsts, two seconds*)

Mercury Litho Co., Miami , Fla. (*three firsts, five seconds*)

Benson Printing Co. (*one first*)

S. C. Toof & Co., Memphis, Tenn. (four firsts, four seconds)

Southwest Printing Co., Dallas, Texas (*one first, two seconds*)

The Rein Co., Houston, Texas (*one first, two seconds*)

Douglas Printing Co., Jacksonville, Fla. (*one first*)

Profits continue low:

Survey Report On Litho Profits—1954

By

W. Floyd Maxwell

Executive Director, Lithographers National Assn., Inc.

Mr. Maxwell prefaced his profits report at the LNA convention with these remarks:

At our convention a year ago at The Greenbrier, we presented our first Survey Report on Lithographic Profits covering the years 1950, 1951, 1952 and 1953. So widespread was the interest shown in that profits study that our board of directors authorized this survey of the 1954 profit position of lithographers.

We express our appreciation to the lithographers who completed and returned our questionnaire form and, particularly, do we appreciate the cooperation of National Association of Photo-Lithographers for their participation again this year. The survey questionnaire form used this year was similar to the form we had used a year earlier with one important exception—this year we asked for excess profit tax information for 1953.

You will perhaps recall that, in order to secure the widest possible participation, we had refrained from asking for any *dollar* information either for net sales or for net profits, before and after taxes. We asked merely that the lithographer indicate by a check mark which one of six sales brackets represented his net sales for each of the years covered by the survey and, similarly, that he report his percentage of net profit both before and after taxes. In order that the individual reports might remain completely anonymous, we provided our own self-addressed return envelope.

Last year's survey was based on 191 usable reports—this year's survey on 170 reports, so the two samples are roughly comparable in size, though, of course, there are some differences in composition. Since both surveys covered the year 1953, we are afforded a good basis for comparison and our conclusion is that, from a statistical standpoint, we have a proper basis for judging the level of 1954 profits as compared with earlier years.

Two economic factors, however, render the comparison more difficult and before presenting the results of the current survey we should like to discuss these two factors briefly. The first is the fact that the excess profits tax, which became effective in July, 1950—immediately following the outbreak of the Korean War—terminated December 31, 1953. Thus, for 29 of the 170 companies covered by our current survey, net profits in 1953 were subject to a tax no longer existent in 1954. We have separately analyzed the profits reports of these 29 companies and shall presently discuss them briefly.

The second economic factor referred to above relates to last year's Revenue Act. Legislation, effective for 1954, revised the federal tax structure to permit, without prior approval, the accrual of certain estimated business expenses thereby permitting what amounted practically to a double deduction of such expenses in the 1954 tax return. These accruals included, among others, such items as paid vacations and certain professional fees. Depreciation provisions of the law also were changed to permit, under certain circumstances, additional depreciation deductions.

Since these changes in the law would have resulted in unexpectedly heavy tax revenue losses for the treasury in 1955, a new law, signed by the president June 15, withdraws retroactively the benefits of certain of these provisions. We have, of course, no way of knowing the extent of the effect of this new law on the 1954 profits as reported by the 170 companies covered in this survey. Undoubtedly, for some, however, an amended tax return would show net profits, both before and after taxes, at a higher level than that reported to us in April on our survey questionnaire.

Chart 1

JUST what does our current profits survey disclose? Turning, first, to the trend of net sales, Chart I discloses the fact that, at least for the 170 companies participating in our survey, dollar sales of lithography in 1954, on average, compared favorably with those for 1953.

The black bars on this chart show the percentage of the *number* of reporting companies whose net sales exceeded $1,000,000 and the gray bars, the *percentage* of the *number* of reporting companies whose net sales were under $1,000,000. The two pairs

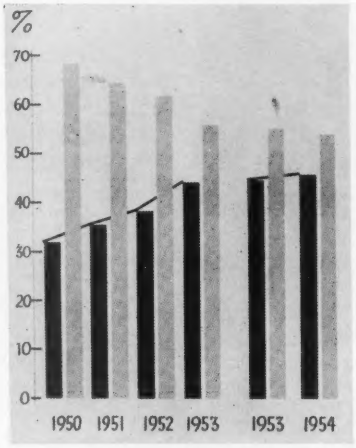


Chart 1—Lithography: Percentage Distribution of Annual Net Sales (Total Firms Reporting).

of bars at the right of the chart show for 1953 and 1954, respectively, the percentage distribution of the 170 reports included in our current survey. The four sets of bars at the left of the chart are shown for comparative purposes and depict for the four years 1950-53 a similar percentage distribution of the 191 reports covered in last year's report. While the indication of sales increase (the black line connecting the tops of the black bars) is not so strong in 1954 over 1953, as in

earlier years, nevertheless, it does exist. We conclude, therefore, that, for the 170 companies, 1954 was not on average a year of declining sales volume, although for business and industry generally 1954 had shown some recession from the preceding peak year.

We turn now from net sales to a study of net profit related to net sales.

Chart 2

Chart II shows, at center and to the right in pairs of bars for 1953 and 1954, the range of net profit, *before*

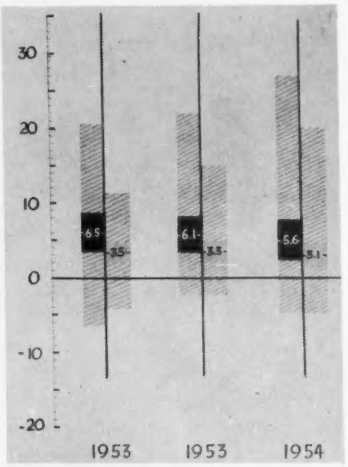


Chart 2—Lithography: Range of Net Profit Before and After Taxes (Total Firms Reporting).

and *after* taxes for the 170 firms reporting. Each vertical bar shows the maximum range of these reports—from the lowest figure reported to the highest. For net profits *before* taxes, the black middle section of the vertical bars—and for net profits after taxes, the gray middle section of the vertical bars—represent the range of the middle 50 per cent of the reports. The lower and upper cross-hatched sections of all the bars represent, respectively, the lower and the upper 25 per cent of the reports. Sections of the bars extending below the horizontal zero (0) line represent net losses and those sections above the zero (0) line, net profits.

The white figures in the black sections of the bars represent the *average* net profit *before* taxes; the black figures in the gray sections of the other bars, the *average* net profit *after* taxes. For 1953, *average* net profit *before* taxes was 6.1 per cent; for 1954, 5.6 per cent. *Average* net profit

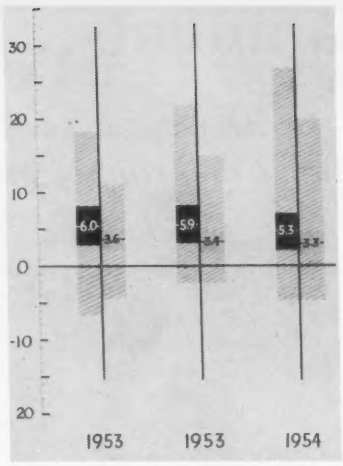


Chart 3—Lithography: Range of Net Profit Before and After Taxes (Annual Net Sales Under $1,000,000).

after taxes in 1953 stood at 3.3 per cent; for 1954, 3.1 per cent.

The pair of bars at the left of the chart show for 1953 similar profit information for the 191 companies covered by our survey last year. They are shown only for purposes of comparison with the 170 companies included in this year's survey. For profits *before* taxes the figures for 1953 compare as follows: 6.5 per cent in the earlier survey and 6.1 per cent in the current survey; after taxes, 3.5 per cent and 3.3 per cent, respectively.

Thus, Chart II shows that for the 170 companies included in our current survey; the *average* profit position, both before and after taxes, is somewhat less favorable than for the 191 companies surveyed last year. It also discloses that 1954 profit margins showed a further sagging tendency. For four years—1951, 1952, 1953 and 1954—profits in the lithographic industry have averaged under 3.5 per cent despite a year-to-year increasing sales volume.

I stated last year, and I would like to repeat the statement, that there is serious question whether a net profit margin so low as this, if long continued, can possibly provide the new funds which will be required for working capital and for rehabilitation of plant and equipment and for normal expansion. As I pointed out then, we do not have access to some of the ordinary sources of new capital but are largely dependent upon the plowing back of earnings into the business.

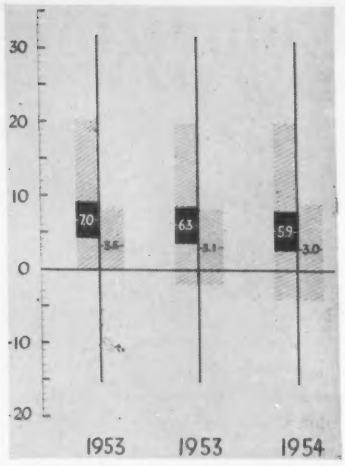


Chart 4—Lithography: Range of Net Profit Before and After Taxes (Annual Net Sales Over $1,000,000).

Charts 3 and 4

On Chart III, profit information, similar to that depicted on Chart II, is shown for the 94 companies with reported net sales in 1954 under $1,000,000. Chart IV covers the 76 companies which reported net sales in 1954 in excess of the $1,000,000. You will note that again this year we have combined the three sales brackets under $1,000,000 and the three sales brackets over $1,000,000. This was done in part to simplify the presentation but more importantly because in some of the smaller sales brackets the number of reports was not large enough to yield, in our opinion, a dependable picture of average net profits for that smaller sales bracket.

While there are, of course, differences between the two charts, the similarities are more striking than the dissimilarities. In both charts, and for both 1953 and 1954, the ranges of the middle 50 per cent of the reports, both before and after taxes, respectively, occur at about the same levels and with about the same percentage point spreads. Obviously, these ranges in each bar — the black and gray sections — are much more significant than the more or less sporadic highs and lows. Thus, referring to the year 1954 on Chart III—except for one company report which

(*Continued on Page* 110)

Color Developments.....

result in improved litho inks and better lithographic presswork

by L. A. Schlapfer, Jr.

Pigments Department, E. I. DuPont de Nemours & Company

THE modern trend in offset lithography, particularly in the packaging and advertising fields, is toward the use of more and more color. This creates a demand for brighter and stronger pigment colors for use in the manufacture of inks used by lithographers. Greater durability, i.e., better light stability, greater resistance to chemicals and heat, and greater resistance to bleed in water, edible fats and greases, solvents, oils, etc., are other qualities demanded by ink users. These needs come as a result of the development and use of new vehicles, new applications, particularly in the food packaging field, expanded use of lithography in the metal decorating field, use of heat set inks in lithography, and the general overall increase in production rates in the offset lithographic printing process. In addition to these demands involving end use characteristics of the printed material, there are the needs of the ink maker. He asks for colors that are softer in texture and more readily wet with vehicles so that they may be more easily ground and dispersed.

Most Pigments OK for Offset

Although offset lithography places an added requirement (lithographic break resistance) on pigments used, that is not important for other types of printing, continued research has brought pigment technology to the point where most of the pigment colors manufactured are usable in lithography. Some pigments are inferior to others in lithographic break resistance but since the pigment is only one component of the ink, those pigments that are considered poorer in their lithographic break resistance are usable through proper formulation.

Pigments available for use in making inks for lithographic printing are shown in the chart. The organic and inorganic types are divided according to basic chemical characteristics of the pigment colors. The first subdivision under inorganics includes lead chromate pigments which are further classified in three groups — chrome yellows, chrome oranges and molybdate oranges.

Chrome yellows range in color from primrose and lemon yellows (rather green undertone) to the medium chrome yellows (rather red or towards the orange in undertone). The light chrome yellows, sometimes called "Excelsior" yellows, are inter-

Synthetic Pigment Colors for Lithographic Inks

INORGANIC

chromates

chrome yellows

primrose or lemon
light
medium
shading

chrome oranges

molybdate oranges

ferrocyanides

iron blue

ORGANIC

azo types

pigment dyes

toluidine reds, para reds, etc.
alkali resistant reds
toluidine yellows
benzidine yellows

precipitated pigment dyes

lithol reds, lake reds C, lithol rubines
permanent red 2B — "Watchungs" BON's
Azo lakes — pigment scarlet, persian orange
"Green Gold"

non-azo types

acid dye lakes

peacock blue
phloxine red

basic dye lakes

PTA's
PMA's

phthalocyanine

"Monastral" blue and green
Ramapo blue and green

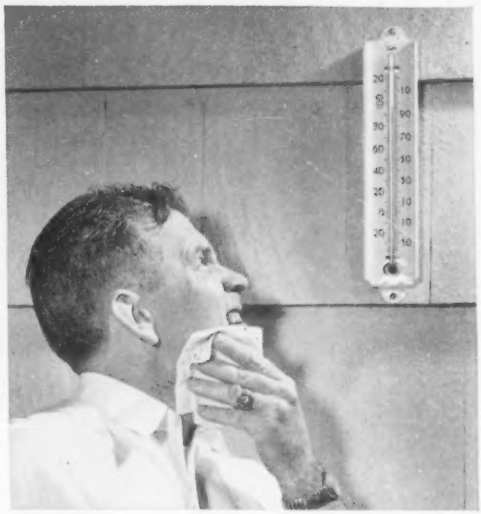
indanthrenes

blue & violet

Kodak
TRADE-MARK

News for Photolithographers

How a coat of K.P.R. can keep you "cool" this summer



Do summer heat and humidity play hob with your plates—and your temper? What can you do to prevent scumming, oxidation, sensitivity variations . . . avoid spoilage and loss?

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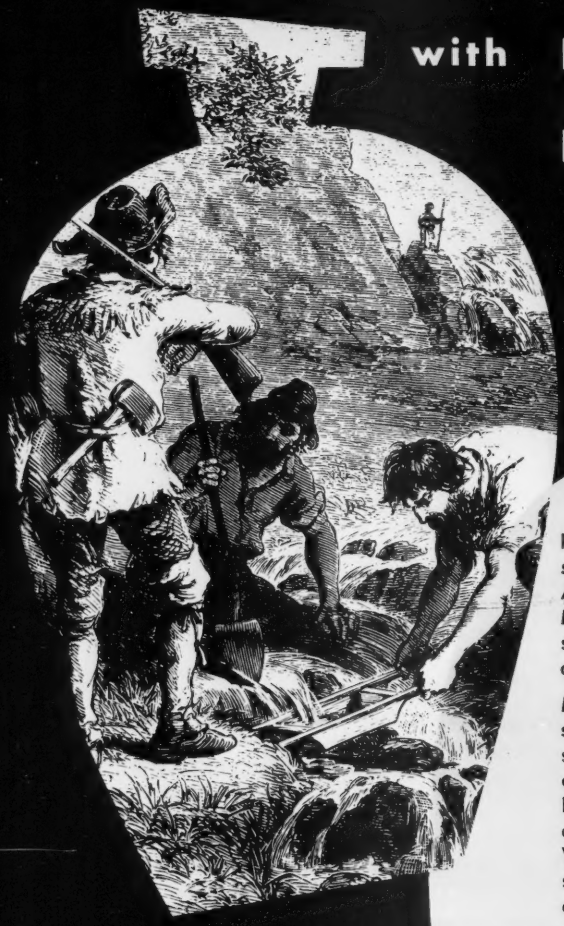

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mediate in shade between the lemon and medium yellows. The color and working properties of the chrome yellows are a function of their chemical composition and of their crystal form. Precipitation of lead chromate —lead sulphate mixtures in the orthorhombic crystal form yields the primrose and lemon yellows. These yellows are the greenest, weakest and poorest in light stability. The light chrome yellow crystals are of a monoclinic form and are also co-precipitated mixtures of lead chromate and lead sulphate. The medium yellows differ from the primrose and light yellows as they are essentially normal lead chromates but are similar to the light chrome yellows in crystal form i.e., monoclinic.

Chrome yellows are widely used because of their low cost, brightness, opacity, wide range of hues and generally good working properties. Their use is limited, however, in those applications where maximum light stability, resistance to alkalies, transparency and freedom from toxicity i.e., on certain food packages, etc., is required. In recent years, the light stability, strength, brightness, lithographic break resistance and ease of dispersion of chrome yellows have been greatly improved. Some of the commercial products are now treated in the manufacturing process to make them more easily wet with ink vehicles. This improves their ease of dispersion in ink vehicles and, in general, improves their lithographic break resistance, i.e., reduces their tendency to color the fountain solution and improves the resistance of their inks to change in rheological properties when subjected to a fountain solution.

One of the most recent developments in the chrome yellow field is Shading Yellow. Its color properties are designed to give bright, lightfast greens when blended with a blue pigment. The greens obtained are brighter than those obtained with a light chrome yellow but have comparable light stability.

Chrome oranges differ chemically from chrome yellows in that they contain substantial amounts of basic lead chromate. Their crystal formation is tetragonal and particle size is generally larger than the chrome yellows. Here again, as in the case of the chrome yellows, the redder or deeper shades of the chrome oranges are weaker in tint. Today, chrome oranges are not too widely used in lithographic inks. Since the advent of molybdate orange, many of the uses of chrome oranges have been replaced with this color because of its greater strength, intensity and higher gloss of its inks.

Molybdate orange, like the chrome oranges, is also precipitated in the form of tetragonal crystals, consisting of co-precipitated normal lead chromate, lead sulphate and lead molybdate. It is, as stated previously, a very strong and intense orange with properties similar to the medium chrome yellows. Because of its strength and intensity, it blends well with dark reds such as lithol rubine to yield a series of intense reds similar in shade to the lithol reds.

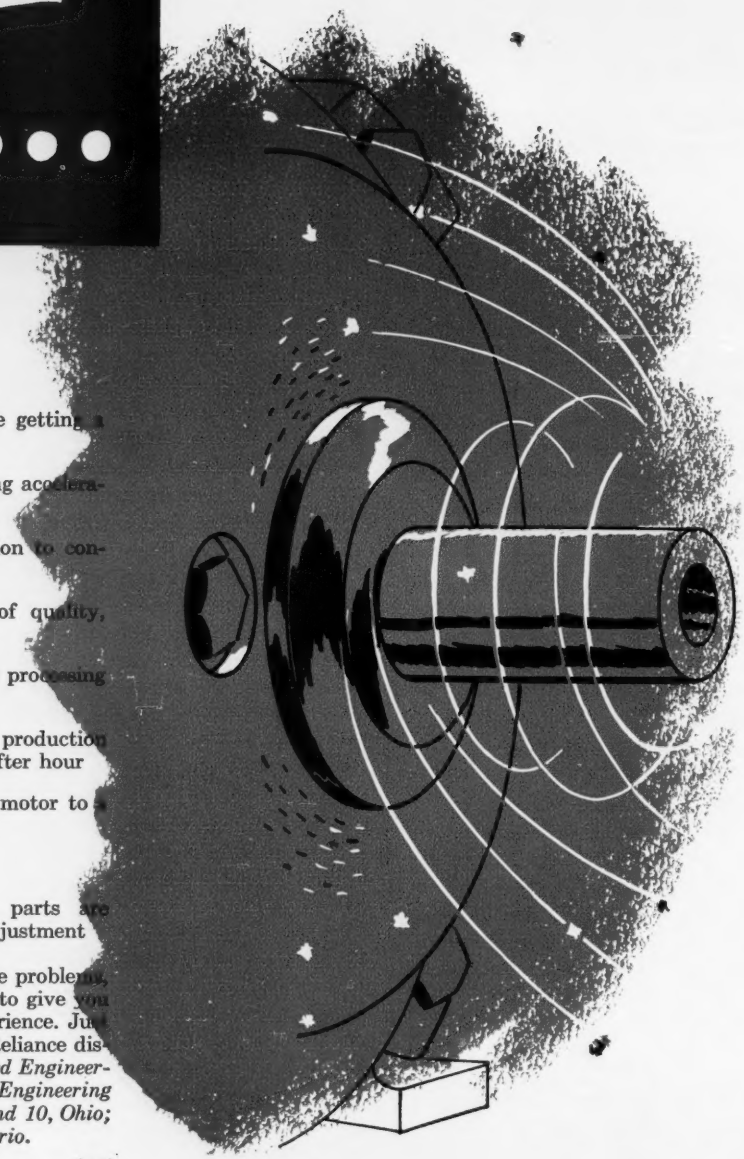
The ferrocyanide pigments constitute the second major sub-division of the inorganic group. The iron blues are, essentially, the only class of pigments of this type used in lithographic printing. They are rather widely used because of their comparatively low cost and good strength. Their use is somewhat limited, however, by their poor resistance to alkali and comparatively poor light stability in tints. Products are available that range from the jet masstone — green tint types to the lighter masstone — red tint types. Many shades of green are available to the ink maker or lithographer by blending iron blues with the chrome yellows. The iron blues used in lithographic inks today represent a considerable improvement over the first iron blues made. Treatments given during their manufacture have made them easier to grind and more easily wet with vehicle, with a consequent improvement in their lithographic break resistance.

The organic group of colored pigments which covers those types made from compounds of carbon are subdivided into the azo and the non-azo types. Azo pigments are those based on the color producing group or chromophore known as the azo linkage (—N=N—). These pigments are produced by diazotizing a suitable primary aromatic amine with nitrous acid. This "diazo" is then coupled or linked with a second organic component to form the colored pigment molecule. The molecules formed that are naturally insoluble in water, yield what are called "Pigment Dyes". Those that must be insolubilized by precipitation with suitable metallic salts to form metal derivatives are termed "Precipitated Pigment Dyes". Generally, the "Pigment Dyes" bleed in oil and organic solvents, whereas the "Precipitated Pigment Dyes" do not. There are exceptions to this general rule, however. This is a very important factor to consider when an ink is printed over another in process printing or the end use of the printed object dictates that the inks applied be non-bleeding in oil and/or organic solvents.

In the Pigment Dye Group are the toluidine and para reds. They are not too widely used in lithographic inks because of their bleeding characteristics and the low gloss or finish of their inks which gives them the appearance of being comparatively dull. A fairly recent development of the Pigment Dye type is the alkali or soap fast reds which belong to the "Naphthanil" or naphthol class. There are three shades available ranging from the light red, which is in the depth range of the toluidine reds, through the medium red to the dark red which is in the depth range of Lithol Rubines. They are reasonably strong, bright reds, having the best resistance to bleed in soap of the organic reds available today. Consequently, they find wide application on soap wrappers, detergent boxes and on many other packages where the best resistance to alkali is required. In recent years, the light stability and soap resistance of these products have been improved to meet the more rigid specifications established by the users of printed packages or cartons.

Organic yellows that fall in the Pigment Dye group are the Hansa

IF...



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or toluidine yellows and the benzidine yellows. The Hansa yellows are available in a series of shades varying in greenness from the Hansa Yellow G shade (reddest in shade) through the 3G and 5G to the 10G which is the greenest in shade. Hansa yellows are not too widely used in lithographic inks because of their bleeding characteristics in hydrocarbon solvents, lacquer solvents and in paraffin. In full shades they have excellent light stability and in this respect are considered superior to benzidine yellows.

Benzidine yellows are also available in a fairly wide range of hues depending on the components and treatments used in their manufacture. The most important member of the series is derived from dichlor-benzidine coupled to aceto-acetanalid (AAA type). Another important member is derived from dichlorbenzidine coupled to aceto-acet-orthotoluidine (OT type). The OT type is slightly superior to the AAA type in light stability and bleed resistance. The benzidine yellows, compared to the chrome yellows, are high in tinting strength, sufficiently so to make them competitive on a strength basis with the lower priced but weaker chrome yellows. It is for this reason that chrome yellows have been replaced, to a degree, by benzidine yellows. This is particularly true of recent years because more and more printed package users are becoming concerned with the possible toxicity of chrome yellows. In some cases it is now specified that no lead containing colors be used in the inks applied on the package.

Lithol Reds

Under the classification of Precipitated Pigment Dyes, we find the Lithol Reds which have long been one of the most important pigments used in lithographic printing. They are widely used because of their comparatively low price, combined with good strength and brilliance. They are limited in their use to a certain extent because of their comparatively poor bleed resistance and light stability. Commercial products are available that range in hue from light, yellow undertone reds through medium reds to maroon shades. Both resinated and non-resinated products are available. Resination, which is the precipitation of metallic resinate along with the pigment dye, yields products with higher finish, greater transparency and less bronze.

Produce Warm Undertones

Lake Red C pigments are also precipitated pigment dyes and are bright yellow shade reds with comparatively poor light stability. Their main use is in obtaining red inks with a warm yellow undertone.

However, because of some of the new developments in the BON Red family, some of the Red Lake C uses have been replaced with a BON Red where better light stability is required.

Lithol Rubine, another precipitated pigment dye is a bright, comparatively blue undertoned red. It has good light stability but only fair bleed resistance and poor resistance to acids and alkalies. It is available in both the resinated and non-resinated forms. The resinated form is higher in finish, more transparent and less bronzy, which is characteristic of resinated products versus their non-resinated counterparts.

"Watchung" Reds

An important group of reds for lithographic inks is that consisting of the Permanent Red 2B Pigments or "Watchung" (*Registered Trade Mark*) Reds. They are now available in shades from a yellow undertone red in the Red Lake C range through the medium reds up to and including the maroon. They are good in light stability and bleed resistance and are quite often used where the Red Lake C or Lithol Reds do not give satisfactory light stability or bleed resistance e.g., on paraffined food wrappers, etc. The BON Reds, which are chemically similar to the Permanent Red 2B pigments, are not as bright as the Permanent Red 2B pigments and are somewhat harder to grind, but are slightly superior in light stability. They quite often find application on outdoor posters, etc., where the best in light stability is required.

Another type of azo pigment is the adsorbed lake type such as Pigment Scarlet and Persian Orange. This type of pigment is formed by adsorbing the dye on an inorganic substrate such as alumina hydrate. Pigment Scarlet, is a bright bluish undertone red that has good baking properties, good light stability and good bleed resistance, but poor resistance to acids and alkalies. Persian Orange is a bright orange but has very poor light stability and bleed resistance and is poor in its lithographing properties.

Metallic Effects with 'Green Gold'

One of the more recent pigment developments in the precipitated azo pigment dye class is the "metalized azo pigment" sold under the name "Green-Gold". It is referred to as a "metalized azo pigment" since the insolubilizing metal, instead of forming a salt, is believed to form a coordinate bond with the azo linkage and other polar groups in the molecule. The product has excellent light stability, bleed resistance, resistance to chemicals and baking properties. The name "Green-Gold" is derived from the fact that its masstone is green and its tint is yellow. Because of its transparency, effective metallic effects can be obtained by printing it over bright metal i.e., in metal decorating applications.

In the organic pigment division under "Non-Azo Types", the first products listed are the acid dye lakes including Phloxine Red and Peacock Blue. They are normally called "Lakes" since they are precipitated on alumina hydrate as a substrate. They are bright, transparent pigments but are very poor in light stability and have very poor bleed resistance. Because of their transparency they find wide application in process printing.

"Basic Dye Lakes" are generally referred to as PTA's or PMA's because the basic dyes are precipitated with phospho-tungstic and/or phospho-molybdic acid complexes. These products are available in a number of colors depending on the color of the dye precipitated. Examples are Victoria Blue, Crystal Violet, Malachite Green, Rhodamine Y (yellow undertone red), Rhodamine B (blue

(*Continued on Page* 111)

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The author presented this paper at TAGA's Annual Convention in Boston, May 9-11.

Dry Offset

by David W. Lewis

American Newspaper Publishers Association
Research Institute, Inc.

SOME of you may have seen the special issue of "Look" magazine, entitled "I Predict For 1955". It was in the preface of this issue that the editors of *Look* depicted the American way of life. I believe it to be synonymous with our research program. Quoting from *Look* magazine:

"You Americans always keep your faces turned toward the future," an astute European once said. We do. As a people, we probably read more gossip columns, buy more tip sheets, consult more experts than any people whoever lived.

Our past is short — and so is our patience. Yesterday's newspaper is as dead as today's will be, the minute that the next edition comes out. It is tomorrow that captures our imagination. We talk about it, bet on it, search for its promise or its threat. We like to guess — and we want to know.

The second paragraph is indicative of our entire operation. Our past is short and to a certain degree, so is our patience. We are anxious to develop new processes and to make improvements on existing methods, where possible. The reference to today's paper being as dead as yesterday's with the coming of a new edition, also applies. This can be exemplified by examining our technical reports which reveal new data and approaches to our problems rendering prior information less valuable. But basically, it is the tomorrow that captures our imagination. This is what we talk about, bet on, the promise or threat which we search for. An excellent example of this is our dry offset program.

High Interest at ANPA

The dry offset process has been one of great interest to the ANPA Research Institute for a number of years. The interest of the Institute lies with the possibility of perfecting the process, from an economical as well as a quality consideration, to the point where it may be feasible to use as an alternate method for the printing of newspaper supplements.

In the past eighteen months, a great deal of information has been accumulated concerning all of the processes involved in dry offset printing. Studies have been made at the Laboratory concerning negative requirements, printing down techniques, etching techniques, press specifications, blanket, ink, and paper requirements as well as press techniques.

Among the first studies made was an investigation of negatives and plate making techniques. The negatives were 120-line, made with a one stop exposure, using a flash to extend the low end if necessary. All plates were etched by the conventional nitric acid method, using zinc as the engraving metal. Due to poor plate making techniques as well as the inherent nature of the conventional engraving process, the data obtained were inconsistent, and when plotted, resulted in erratic curves which were practically valueless for the purpose of determining optimum negative and plate making techniques.

In an attempt to maintain uniform conditions with respect to plate making, all conventionally etched halftone plates were given a flat etch only. If any re-etching had been done, the printed page would not have had any relation to the original negative. This is one reason why the halftone break presented a problem of paramount importance. In an effort to eliminate this problem, some work was done with elliptical stops in the copy camera. This relieved the problem but did not eliminate it. Because a large percentage of the halftone break was occurring in the etching operation, some elementary tests were made on the DOW-ANPA etching process. It was found that the plates etched by the DOW-ANPA process were infinitely better than those etched by the conventional process. In order to obtain the desired tone range with the particular process, it was necessary to change the negative specifications. In doing this, it was also learned that lower tones could be held during the printing operation due to the additional depth which can be obtained with the used of this particular process.

In view of the excellent work which has been obtained from the DOW-

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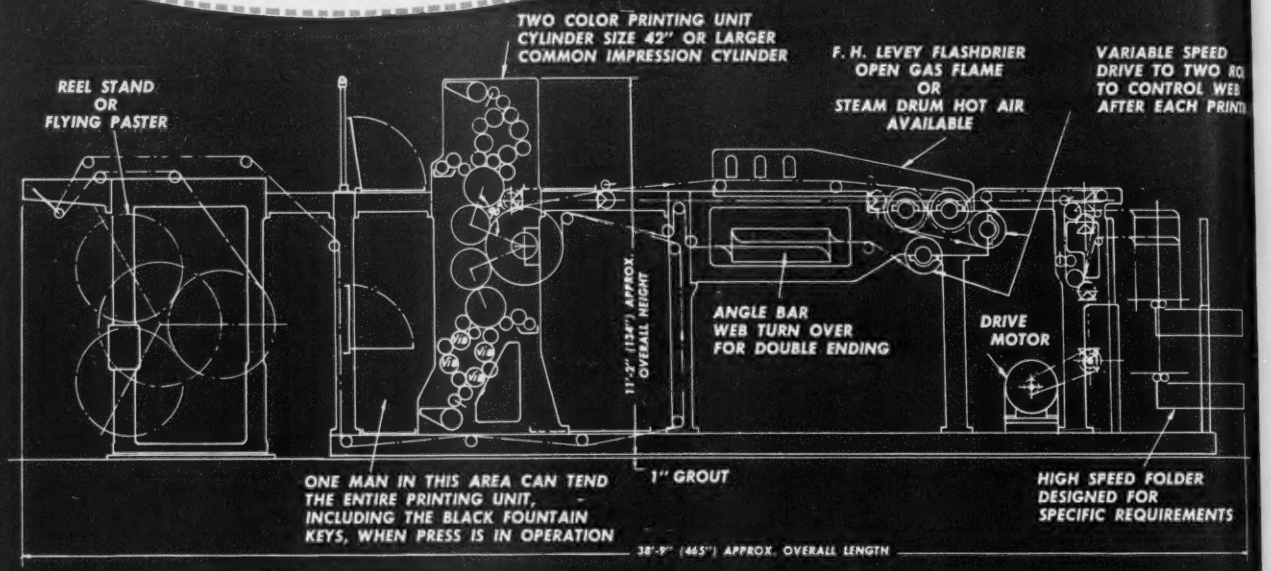

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Introduction of the magnesium plate to the dry offset process necessitated the design of a hot bending fixture which would allow magnesium plates to be locked up on a small diameter cylinder with a minimum gutter. The fixture was designed to bend 0.025″ magnesium to 90° with a minimum radius of 0.062″.

Insert for Penrose Annual

In the fall of 1953, the Institute was given the opportunity of printing an insert to the Penrose Annual. The insert was printed by dry offset at the Easton Laboratory. A brief article pertaining to the dry offset program was also included in the Annual. The copy used for the insert included: a halftone cut, type, reverse type, fineline, and a monotone cut. The insert was printed on 32 lb. newsprint using an ATF 17″ x 22″ offset press.

Because of differences in the offset blankets used, an investigation of blanket surfaces was initiated to determine the smoothness, uniformity, and hardness of the various blankets commercially available. Smoothness tests were made by the Institute of Paper Chemistry, using the Chapman Smoothness Tester. Photomicrographs of the blankets were made at the Laboratory so that a visual comparison could be made. The blanket surfaces were also investigated with the use of the Brush Surface Analyzer. The latter seems to be an excellent method of comparing surfaces; but the equipment at the Laboratory is not yet complete and blanket tests have been discontinued until the balance of the equipment has been installed. Data accumulated to date indicates that the best printing results are obtained from a hard smooth blanket. It is hoped that the completion of this investigation will make it possible to place exact limitations on blanket specifications.

In October, 1953, the first actual tests were started on the Rutherford 12″ web-fed perfecting offset press. This press was donated by Sun Chemical Corp. First efforts were concentrated on establishing the proper packing relationship for the plate and blanket cylinders. Various blankets were also tested to see if there was an appreciable difference in performance between the sheet fed and web-fed presses. It was found that there was a slight difference in the packing requirements of the plate and offset blanket couple and considerable difference between the offset blanket and impression blanket.

If the two types of presses are analyzed with respect to impression, it is found that the sheet fed press obtains the necessary pressure to transfer the image from the blanket to the paper by using a steel impression cylinder. In the case of the perfecting press, the transfer pressure is supplied by the offset blanket of the opposite side of the press. If a three-ply blanket is used on the sheet fed press, there will be only the sheet to be printed, one three-ply blanket, and the necessary packing between the impression cylinder and the actual steel blanket cylinder. However, in the case of the perfecting press there is the sheet to be printed, two three-ply blankets, and the necessary packing. It is believed that this is the reason that excessive overpacking is necessary when printing dry offset on our perfecting press. Unfortunately, the overpacking of the first blanket cylinder to obtain proper printing pressure will disturb the ideal packing relationship between that second blanket and plate.

Solving the Blanket Problem

A possible solution to this problem may be to undercut the blanket cylinder for a two-ply blanket rather than the present undercut which is designed for use with a three-ply blanket. The perfecting press would then have 33 percent more blanket than the sheet fed press rather than the additional 100 percent that it now carries with the two three-ply blankets.

A new Hess and Barker perfecting press which has been installed at the Laboratory for tests on other projects is undercut for two-ply blankets. When the initial work on this project is completed, one unit will be modified for dry offset printing. At that time the advantages and disadvantages of the two-ply blanket system, relative to dry offset, can be investigated.

In February 1954, a cooperative program was established with Charles Eneu Johnson Company, whereby they would supply a variety of inks in an effort to establish a suitable dry offset ink that would produce good quality at speeds up to 25,000 IPH. Special dry offset inks which have been supplied by Charles Eneu Johnson Company, Sun Chemical Corp., McCutcheon Bros. and Quality, Inc., and many others have been the best inks that we have used to date.

Several tests have been made with a standard plate such that a cross-section of several different inks with newsprint, Canadian news roto and rotogravure papers, could be obtained. It was concluded that the Canadian news roto gave the best results with the inks that are available at the present time.

Combination Copy Used

As part of the tests made on the web-fed press, higher speeds were attempted. Higher speeds were accompanied by considerable mechanical difficulties, making it almost impossible to maintain roller settings and proper control of ink flow. Successful tests have been made with web speed as high as 800 ft. per minute.

During the past four months, a number of very satisfactory runs have been made where the copy used consisted of type, reverse type, and a cut of a bride wearing a satin wedding gown. In view of the results obtained on these runs, copy for an entire combination page was obtained. This particular copy had previously been printed by gravure for a newspaper supplement. This offered an excellent means of comparing the dry offset processes with gravure, where identical copy had been used. Results were excellent.

Adaption of the DOW-ANPA etching process eliminated a large percentage of the halftone break; however, the balance of the problem lies with the negative. The inherent nature of the photographic process prevents linear continuous tone copy from being screened such that the

(*Continued on Page* 119)

Technical BRIEFS

Abstracts of Current Literature in the Graphic Arts

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Photography, Tone and Color Correction

PHOTOLITHO NOTES. J. S. Mertle. *National Lithographer* 62, No. 4, April, 1955, pages 48-49 (2 pages). The DuPont Company has patented an anti-bronzing compound which will keep the silver image on a paper print from changing color or becoming lower in density when ferrotyped. Silver can be reclaimed from the exhausted hypo solution, but unless large amounts of hypo are processed, it is not worthwhile. A formula for a film cement patented by Eastman Kodak is given. A colored lacquer, which can be stripped, is described. It can be sprayed on windows to reduce the color temperature of the sunlight so that it approaches that of artificial light. The author suggests that it be used in the windows of the platemaking room to reduce the possibility of fogging the plates. A method of reproducing colored maps without a camera is described. Using special films contact positives and separation negatives can be made. This is based on the theory of solarization and the Herschel effect. The range of acidity of printing paper is discussed.

PARTIAL REVERSAL LINE. Wynn Bullock. *Photographic Journal* 95A, April, 1955, pages 67-69 (3 pages). Partial reversal of continuous-tone or line images to provide line outline effects is described. Object is illuminated to appear as silhouette against even background. During development of film a fogging exposure is given. Background and object densities become equal but outline is produced. Width of the line is related to sharpness of focussing. (See U. S. Patent 2,438,494, British Patent 669,633).

*NEW CHROMART TRICOLOR SEPARATION NEGATIVE MATERIAL AND PROCESS. Hans v. Fraunhofer. *Brit. Kinemat.* 26, 1954, pages 79-80; *Chemical Abstracts* 49, No. 3, February 10, 1955, page 1455. The Chromart-Tricolor separation negative material and process is based on the principle of Ag solvent transfer, and uses only Ag instead of dye images. The following layers are coated in order on safety base to form the light-sensitive material: anti-halo layer, red-sensitive emulsion layer, plain gelatin insulating layer, green-sensitive emulsion layer, yellow dye filter layer, and blue-sensitive emulsion layer. Development and fixing are carried out as though the film were a normal black-and-white negative. The Ag image of the top layer then is bleached to prepare it for transfer to a new support. The transfer material consists of a base coated with a gelatin layer containing a metal sulfide. This layer is soaked in a solution containing a Ag halide solvent which, when the layer is brought in contact with the bleached film, causes transfer of the Ag salt to the transfer layer where a Ag_2S image is formed. The gelatin of the top and filter layers then is removed and the green record image is bleached and transferred to a new support, leaving the red record on the original support. British Kinematographer is published by the British Kinematograph Society, 164 Shaftesbury Avenue, London, W.C. 2, England.

Paper and Ink

METALLIC INKS. *American Ink Maker* 32, No. 12, December, 1954, page 65; *Printing Abstracts* 10, No. 3, March, 1955, pages 119-120. Owing to the porous nature of Kromekote two impressions are required when printing with offset metallic inks. Use of two-color presses for this was not recommended. Other subjects discussed were: The effect of boiling on silver metallic inks, quick-set metallic inks, the use of Panapol hydrocarbons to improve metallic ink brilliancy, metallic inks for aniline and gravure printing, the possibility of making chromium metallic pigments and the number of sheets which can normally be run without press shutdowns with a litho gold ink when fine detail work is involved.

THE TECHNOLOGY OF PAPER COATING. II. *Paint, Oil and Chemical Review* 118, No. 8, April 21, 1955, pages 16-18, 20-21, 38-39 (7 pages). The subject material covered in this article includes: IV. Inorganic Coatings for Paper — A. Coating Pigments, B. Coating Adhesives; V. Organic Coatings for Paper — A. Waxes, B. Water Soluble Organic Coatings — 1. Polyvinyl Alcohol, 2. Methyl Cellulose, 3. Sodium Carboxymethylcellulose, 4. Sodium Alginate.

THE TECHNOLOGY OF PAPER COATING. III. *Paint, Oil and Chemical Review* 118, No. 9, May 5, 1955, pages 22, 24-26, 34, 36-38 (8 pages). The index to Part III reads as follows: V. Organic Coatings for Paper — continued — C. Spirit Varnish Coatings, 1. Natural Resins, 2. Zein, D. Nitrocellulose Coatings, E. Cellulose Acetate and Related Esters, F. Cellulose Ether, G. Polyvinyl Acetate and Polyvinyl Chloride, 1. Polyvinyl Acetate, 2. Polyvinyl Chloride and 3. Polyvinyl Acetate — Polyvinyl Chloride Copolymers.

*TESTING APPARATUS FOR THE PRINTER. *Deutscher Drucker* 52, No. 12, December, 1954, pages 593-595 (in German); *Printing Abstracts* 10, No. 3, March, 1955, page 141. The two instruments described were designed by the Institut der Deutschen Gesellschaft für Forschung im Graphischen Gewerbe, Munich, and are manufactured by Firma Karl Frank GmbH, Weinheim-Birkenau. The printability tester prints test strips which can be tested and examined for ink consumption, setoff, strike-through, drying time, etc. Solid and screened testing blocks are provided, printing speed and impression are adjustable and the instrument can be adapted for testing rubberplates and blankets and stocks other than paper. The scuff resistance tester uses two test pieces, one mounted on a flat reciprocating plate and the other on a revolving cylinder. These two movements can take place simultaneously or separately. Deutscher Drucker is published by Verlag Ernst Boehme, Reichensteiner Weg 8-10, Berlin-Lichterfelde-West, Germany.

PHOTOGRAPHIC Clinic

By Herbert P. Paschel
Graphic Arts Consultant

Q: With a 19″ lens I am able to get 6:1 reduction. What focal length would I need to get 10:1 reduction? H.G.K., Louisville.

A: From the figures quoted it is obvious that the maximum separation between copy and film is at least 155″. A 12″ lens at 10:1 reduction would require 145″ between copy and film. From this we can deduce that the bed length of the camera is adequate. However, another distance is equally important; namely, the minimum separation that can be obtained between lens and film. At 6:1 reduction with the 19″ lens the separation between lens and film is 22.3 inches. With the 12″ lens at 10:1 reduction the lens to film separation is shortened to only 13.2 inches. Unless this lesser bellows extension can be obtained it is immaterial that the bed length is adequate. Before buying a 12″ lens measure the distance between film and the back of the lensboard with the bellows totally compressed. If this distance is greater than the minimum required you will not be able to use the 12″ lens.

An exception is possible if the design of your camera permits the use of a reverse lens cone. By this means the lens can be extended into the bellows behind the lensboard proper. This latter possibility has other problems especially in the difficulty in getting at the lens to change the diaphragm and insert filters. If you would like further information on the subject I would suggest that you read "Choosing A Process Camera", which appeared in the February, April, May and June 1946 issues of MODERN LITHOGRAPHY. If still available, you might obtain a reprint from Consolidated Photo Engravers & Lithographers Equipment Co., Chicago.

Camera troubles? Why not drop a note to Mr. Paschel, c/o Modern Lithography, Box 31, Caldwell, N. J. He'll be glad to draw on his years of experience as a consultant to answer your question.

Q: What is reticulation and how can it be avoided? I.M.B., Holyoke, Mass.

A: Reticulation is a condition which occurs during the processing of films and plates. It is actually a change in the gelatin structure and a migration of the silver particles of the image. It is caused by excessive swelling and contraction of the gelatin. Instead of remaining a uniform film the gelatin assumes a pattern of ridges and valleys. The silver particles of the developed image tend to migrate to the ridges leaving less than the normal amount in the valleys.

Reticulation generally is caused by either one or both of two undesirable processing conditions. The first is subjecting the films or plates to sudden and extreme changes in temperature. The second is subjecting the sensitive material to conditions which first soften the gelatin excessively and then suddenly harden it abnormally. The latter case is exemplified by an extremely alkaline developer followed by a concentrated hardening bath. If, to the latter case, you add extremes in temperature, reticulation is almost a certainty. Reticulation can be avoided by processing material at normal temperatures, with all solutions maintained at the same temperature. The solutions should be formulated as recommended by the manufacturer of the sensitive material and used at safe concentrations. If you are unable to keep your solutions at normal temperatures then, at least, be sure to maintain them at equal temperatures. This of course, applies with equal emphasis to the wash water. In the absence of temperature control, a practical expedient is to take the temperature of the wash water as a guide for the temperature of the processing solutions.

Q: How does the fluorescent phenomenon work in the drop-out halftone processes? O.L.J., Philadelphia.

A: There are two ways in which fluorescence is employed in drop-out processes and in each case it is a device whereby the highlight areas are separated from the tones. The two methods are based on the fact that a fluorescent substance absorbs short wave radiation (ultra-violet) and emits this as visible light. Special copy is required in each of the two methods. In Fluorographic copy the tone parts of the image are fluorescent, the background and highlight areas are not. After conclusion of a normal halftone exposure, an ultraviolet transmitting filter is placed

(*Continued on Page* 119)

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WITH
20/20 OVERPRINT VARNISH
20/20 OVERPRINT VARNISH is the first crystal-clear varnish that's non-yellowing and scratch-resistant. 20/20 is homogenized, will not settle out, can be used without additives. Fast drying on stock or printed surface. Ideal for use on soap, detergent, chemical labels—20/20 is acid-alkali proof. Equally good results in letterpress and litho. Every batch is "run tested" and the film is certified scratch-resistant on the Southerland Rub Tester. Try 20/20—YOU CAN SEE THE DIFFERENCE!
GLAZCOTE INK CONDITIONER
Homogenized GLAZCOTE makes all inks tougher, glossier, and highly resistant to scratches. Blends readily, equally good for letterpress and litho.
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Manufacturers of Hypothiolate, Hypothiolate HA 301, Bytaneum, 33 and 0-33 Ink Conditioners, Klemm Fluorescent Inks.
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COMPOUNDING CO.
1720 North Damen Avenue
Chicago 47, Illinois
EXPORT: Guiterman Co., Inc. New York 4
CANADA: Canadian Fine Color Co., Ltd., Toronto

NAPL Convention Program

Sept. 21-24, Hotel Statler, Cleveland

PANEL DISCUSSION on Quality Control. Stanley R. Rinehart, assistant manager, printing division, E. I. du Pont de Nemours & Co., chairman.

JOHN F. PERRIN, manufacturing manager, Eastern plants, U. S. Printing & Lithograph Co., will be chairman of a panel that will discuss, "What's New in Equipment, Supplies, Materials and Methods?"

KENNETH McFARLAND, educational consultant to General Motors Corp., will address the convention on the topic "Lamp Lighters."

"BRADSHAW'S BILLIONS," a motion picture from the Graphic Reproduction division of Eastman Kodak Co., will be shown at one of the sessions. S. G. Hall will introduce the film.

L. E. GODA, JR., Eastman Kodak Co., will speak on "What's New in Photography."

"SILK SCREEN AS A SUPPLEMENT TO LITHOGRAPHY" will be the subject of a talk by Ralph Karsten, president, Screen Flock Industries, Inc., and vice president of the Screen Process Printing Association International.

FRED W. HOCH, management consultant, will give a talk on "Lithographic Production Standards."

"LITHOGRAPHIC LABOR RELATIONS" will be the subject of a talk by George A. Mattson, executive director, Chicago Lithographers Association.

CHARLES V. MORRIS, assistant to the president, Henry Lindenmeyr & Sons, will give a talk entitled "'Chick' Morris, Lithographer, Examines His Advertising and Public Relations."

WILLIAM T. STEVENSON, Stevenson Photo Color Separation Co., will give a talk on "The Relationship Between the Plate Maker and the Lithographer."

Saturday, September 24th, will be question and answer sessions. The Litho Club of Cleveland, Lithographic Technical Foundation, and the National Association of Litho Clubs have been invited to participate in this lithographic craftsmen's day. William J. Stevens, manager, eastern offset sales district, Miehle Printing Press and Manufacturing Co., will preside over the following panel:

Technical—Michael H. Bruno, Lithographic Technical Foundation
Paper—Joseph H. Dunton, W. C. Hamilton & Sons
Camera—John McMaster, Eastman Kodak Co.
Ink—Fred J. Dankert, Howard Flint Ink Co.
Press—Howard Seel, Harris-Seybold Co.
Plates—Adolph Fletcher, Copifyer Lithograph Corp.
Chemical—Albert R. Materazzi, Litho Chemical and Supply Co.

LITHO PRODUCTION

Clinic

by Theodore F. Makarius

Variation of Color on the Offset Press

CAUSES for uneven printing on the offset press are not always the fault of the pressman. Often a positive may be over-etched and the halftone dots will become gray, making it impossible to step and repeat multiple images and get a uniform plate. If the dots are not firm and opaque, the slighest variation in time when making exposures will result in an uneven plate. This being the case it becomes impossible to correct it in printing. This applies of course, where two or more exposures are made of the same subject.

Another cause for difficulty which happens when there isn't close cooperation between camera and press is using the wrong screen angle when photographing process color work. I have seen cases where the angle between the red and the pink separation were the same, so that when the pink was being printed it was impossible to get two sheets alike. Consecutively run sheets woud be either too light or too strong in the pink depending on the register of the individual sheet.

The light sheets were those on which the pink dots printed exactly over the red dots and the heavy or strong sheets were those on which the pink dots printed in between the other dots. Had the screen angle of the two colors been correct the same amount of white paper would show on each sheet in the screen area regardless of variation in register. If the pressman hasn't had this experience before, he may lose a great deal of time looking for the trouble on the press.

Discovered Too Late

I know of one case where the job was almost completed before the trouble was discovered. This happened because the pressman was in the habit of examining one sheet at a time. It was a short run and the comparatively few sheets on his examining table were almost all in perfect register and the pink dots practically covered the red. However, when the job was hand inspected it was found that many of the sheets in the pile were entirely too heavy and upon investigation these sheets proved to be slightly out of register. I would like to make clear that misregister referred to here wasn't to a degree so that the job would suffer as far as register was concerned.

It is also important where large plates are used that the plate maker exercise the greatest care in the development of his plate. On a sheet full of the same subjects over developing certain portions may cause an unevenness which may look trivial on the plate. On the press it is a different story. When looking at a printed sheet, the difference between a sharp impression and a full one is very misleading. The sharp subject tempts the pressman to open the ink fountain while the full subjects call for the reverse. This condition makes fountain setting difficult because the slightest increase or decrease in the flow of ink makes a vast difference in the opposite images. Usually under these circumstances the pressman has no control over the uniformity of the job.

Misjudging Color

A mistake often made by pressmen is misjudging the color strength of ink to use on different jobs. Strange as it may seem, very often an ink is too strong for the job at hand. When this happens it becomes very difficult to run uniformly because of the small tolerance between light and dark. The trouble usually starts with the sheets printing too strong and because it takes a long time for the color to run down to the proper strength, too many sheets are run off color. When it finally does print light, the slightest amount of ink added to the rollers will make the print too heavy or strong. The remedy, of course, is to reduce the strength of color and run a heavier film of ink on the rollers.

Unseasoned paper may sometimes affect the evenness of the run, especially when running halftones. If paper comes to the pressroom in a

(*Continued on Page* 115)

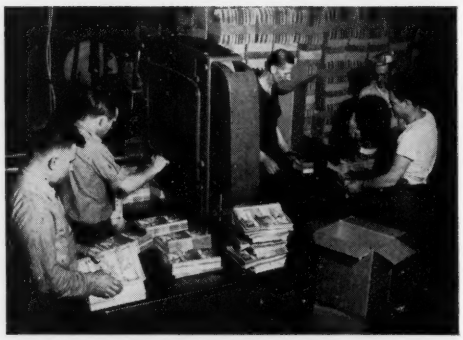
Trimming Gang Run Booklets

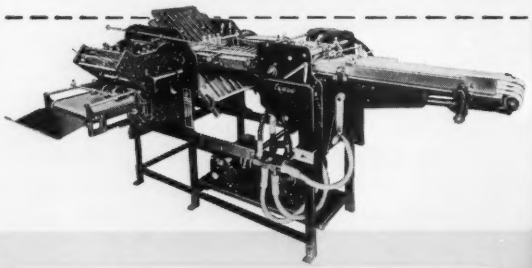
View of the bindery department of the Greater Buffalo Press, Inc., showing the Brackett Safety Trimmer in operation.

AT THE GREATER BUFFALO PRESS, INC,

A Brackett Safety Trimmer was used to trim three sides and cut apart millions of Davy Crockett comic books, 7 x 3½", printed and stitched six-up. The Brackett produced an average of 24,000 booklets per hour . . . beyond question, the fastest, most economical trimming method. One operator fed the machine . . . it required 6 to take off and stack the product!

The same machine was used to trim and cut apart 20,000 copies per hour of the 7 x 10" Davy Crockett coloring books, which were stitched two-up. Shifting from one job to another on the Brackett does not require tedious positioning of knives or gauges. The Brackett spacer shaft pre-set for a particular job is slipped into place and the trimmer is ready to run.





On two model "WW" Cleveland Folders similar to the one shown above, located in the Rapid Bindery plant, Buffalo, N. Y. a single fold was made to finish these Davy Crockett comic books. Another example of the versatility and dependability of Cleveland Folders . . . the original buckle folder.

The Brackett Safety Trimmer is manufactured, sold, and serviced by the Dexter Folder Company. A "Brackett Production Data File" booklet showing production rates on trimming of booklets, paper, labels, etc., has been prepared. Copies are available upon request . . . without obligation, of course.

DEXTER FOLDER COMPANY

General Sales Office

330 West 42nd Street New York 36, N. Y.

Metal Decorating

Barrington Research Center Dedicated

A NEW research center, which takes into consideration the needs of metal lithography and the effects of world politics was dedicated May 26 by American Co. The research and development center is located in Barrington, Ill.

For the metal decorating field, the center contains delicate instruments for identifying organic coatings and distinguishing millions of different colors and hues. The laboratory has a staff of 140 scientists and technical specialists who have a total of 500 advanced types of research equipment at their disposal.

Tin-Less Cans

With an eye toward world politics, American Can reported that foremost among its long-range research projects is the quest for can-making materials that will eliminate this country's dependence on tin. This project, known as "Operation Survival," is seeking alternates for tin "because major overseas sources of the metal lie in the path of communist aggression which threatens supply lines in times of war or other international emergency."

Secretary of Agriculture Ezra Taft Benson was the honored guest at the dedication which was attended by more than 200 scientists and technical people. The program included inspection of research equipment located in more than 50 separate laboratory sections.

"This modern scientific center — which has been two decades in planning — has been especially designed, engineered and equipped to develop and perfect the containers of tomorrow," William C. Stolk, president of Canco, said.

In commenting on the containers of the future, Mr. Stolk said that the can-making industry is on the threshold of a new era of tinless cans and that "if our progress continues at the present rate, I do not hesitate to predict that all the cans that have been subjected to the vagaries of tin shortages in the past will never again be curtailed because tin is in short supply. I also feel that a very high percentage of all metal cans produced in this country will be tinless within the next decade."

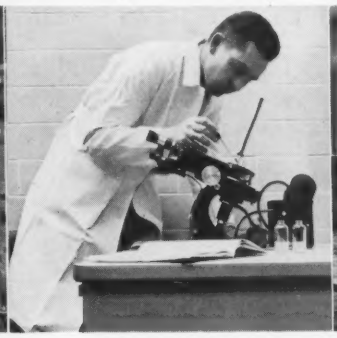
Emphasis on Future

"This research center has its creative sights trained on the role packaged food and non-food products will play in the next half century, and its unequalled facilities are designed to meet every foreseeable problem," Mr. Stolk added. "I am

Metal decorating processes are expected to make big strides with help of Canco's new Barrington, Ill. research center.

Identifying chemical nature of container coatings is easy with this refractometer being used in the instrument room.

Control of litho inks is helped with the recording spectrophotometer, which can distinguish a million colors and hues.



Reliability

Reliability and the name, "Wagner," have been synonymous in the Metal Decorating Industry for years. This reputation, given by our customers, is our highest achievement. It is the result of catering to the Metal Decorating Field's specialized needs for over fifty years.

Today's high speed coating lines need the best in equipment and Wagner can supply it. You can be assured of this, when you order the whole line — from Feeder to Piler — from Wagner.

The Wagner line includes: ROTARY-AIR OVENS, D. E. F. OVENS, AUTOMATIC STRIPPERS, SPOT COATERS, VARNISHING MACHINES, AUTOMATIC FEEDERS, ROLLER REVOLVING MACHINES, LABORATORY COATERS, SYNCHRONIZING DRIVES, AND OTHER SPECIALIZED EQUIPMENT.

When thinking of Progress — think of Wagner!

WAGNER LITHO MACHINERY

Metal Decorating Machinery

Harborside Terminal, Unit 3, 34 Exchange Place, Jersey City, N. J.

NS NATIONAL-STANDARD Company BUFFALO-MICHIGAN

Division

sure the research center will be a key instrument in the industry's progress in the years that lie immediately ahead — an era of packaging destined to be the most significant this country has seen."

The tin can is on the way out and in 15 years will be in a class with the steam locomotive, he said. In its place, will come cans protected by plastic or aluminum coatings; or they may be fabricated with steel having seams that are welded or sealed with a non-metalic solder.

The company, has been working on "Operation Survival" for many years. He recalled the industry's use of tin for coating the familiar sheet steel containers at an average of 1.3 pounds per 100 pounds of steel sheets. Today, this has been cut to an industry-wide average of 0.52 pound (American Can's own average is now only 0.48 of a pound). If another war-born tin shortage should develop, he declared, progress in development of tinless containers has assured many products classified in the last war as "non-essential", an expanded use for can.

•

Deep Draw Coatings

The Watson-Standard Co., Pittsburgh, has introduced a new system of coatings specifically formulated for use where deep drawing is required. This system, available in black and white, includes Watson-Standard Size 17-265, White P9268B, Black 17-264 and Finishing Varnish 13-952A.

Excellent fabrication qualities and high chemical resistant, particularly to alcohols, is claimed. It is ideal for aluminum whiskey cap seals and the fine buffing characteristics also make it suitable for the manufacture of embossed signs, insignias and nameplates, the company said.

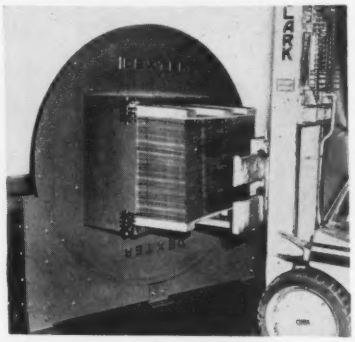
•

Dexter Opens Detroit Office

Dexter Folder Co., Pearl River, N. Y. has announced the opening of a new office in the Dime Building, Detroit. The new center will serve the Michigan territory with Dexter's products in the metal working, metal decorating and printing industry.

"Pack Turnover" Speeds Output

A new "Pack Turnover," developed by Dexter Folder Co., Pearl River, N. Y., permits 25 per cent increased plate and metal lithographing by eliminating the need for turning over each sheet individually as it emerges from the drying or baking oven. Sheets are piled immediately as they



come from the oven and a complete bundle is turned in one operation.

Advantages gained by the new Turnover at Caspers Tin Plate Co., Chicago, include elimination of paddle-wheel turnovers, allowing speeds approaching 90 and 100 sheets per minute.

At Caspers the machine services several production lines. By eliminating the paddle wheels, additional floor space is provided and ovens may be lengthened.

In operation, a fork truck picks up a load from one of Casper's automatic pilers and carries it to the Pack Turnover. An upside-down pallet is placed atop the load; the driver, without leaving the truck, pushes the switch which rotates the load, and then removes it from the machine and transports it to the next step. Average time for complete turnover is 20 seconds. Loads weighing to 6000 pounds are handled, and sheet sizes range from 16 x 16" to 36 x 36". Maximum height including pallets is 27", minimum is 17".

•

Fraser to Rheem Co.

Rheem Manufacturing Co. has named John F. Fraser, Jr. as Chicago regional promotion manager. For the past two years he has been associated with Campbell-Ewald Advertising Agency.

I.D. Co. at Candy Makers Show

I.D. Co., New York, exclusive representatives in the U. S. for imported metal containers for the packaging of fine confections, exhibited at the National Confectioners Association's convention at the Conrad Hilton Hotel, last month in Chicago.

Decorating by lithography is done by the century-old Metal Box Co., London, England. Trays, baskets, compotes and gift and premium items were shown.

•

Sherwin-Williams Goes to Litho

Complete lithographing facilities, including a press and coating line, will be included in a new can manufacturing plant being built by The Sherwin-Williams Co. at San Leandro, Calif. According to S. B. Coolidge, vice president and director of auxiliaries, the new plant is expected to be in operation about Nov. 1. It will have 75,000 square feet of floor space with production capacity of more than 50 million cans a year. The plant will cost $1,500,000.

Modern lithographing equipment to be installed includes: 6000 lb. roller conveyor type Dexter Feeders; Wagner Model K 12" x 38" conventional type spot coaters; Young Bros. continuous-type zone coating and press ovens; and a 35" x 36" straight line Hoe Automatic metal decorating press with pre-registering table.

The new plant is designed to meet container requirements in the West Coast area and will produce cans to package motor oils and for other paint manufacturers in the West as well as for the paints and chemical products produced at Sherwin-Williams' Los Angeles and Emeryville, Calif. factories.

•

Wiesley to Continental Can

D. B. Wiesley has been appointed general manager of production engineering for the Metal Division of Continental Can Co. For the past 16 years, Mr. Wiesley has been connected with the American Can Co. in development engineering, operating management and industrial relations work.

Low Profits, Plans Discussed at 50th

LITHOGRAPHERS from all parts of the United States and Canada were warned late last month that profits in the lithographic industry continue to be too low for comfort. That warning was sounded by Floyd Maxwell, who addressed the 50th anniversary convention of the Lithographers National Association at Lake Placid, New York.

Mr. Maxwell, executive director of the association, drew on the results of an extensive survey questionnaire in sounding his warning to the membership. Citing figures to show that profits in the industry have averaged under 3.5 percent, despite a year-to-year increasing sales volume, the association officer declared:

'Serious Danger'

"I stated last year, and I would like to repeat the statement here, that there is serious question whether a net profit margin so low as this, if long continued, can possibly pro-

1. Floyd Maxwell (l.), Executive Director, and Carl Schmidt, President of LNA.

2. (l. to r.) H. L. Johnson, Western Printing & Lithographing; Howard Soriano, Sinclair & Valentine; Carl Mellick, Miehle Printing Press & Mfg. Co.; and Charles Harwood, Miehle.

3. (l. to r.) W. F. Cornell, Interchemical Corp.; Wade Griswold, LTF; and Carl Mellick, Miehle Prtg. Press & Mfg. Co.

4. (l. to r.) Charles Shapiro, LTF; Mrs. M. Bruno; and Mike Bruno, LTF.

5. R. A. Tobias (l.) and D. G. Manley, American Type Founders, Inc.

ns for Improvement

th LNA Convention

vide the new funds which will be required for working capital and for rehabilitation of plant and equipment and for normal expansion. As I pointed out then, we do not have access to some of the ordinary sources of new capital but are largely dependent upon the plowing back of earnings into the business."

Concluding his report, Mr. Maxwell cautioned that "if lithographers are not fully sharing in this burst of activity (reflected by the record high index of Gross National Product) then we need to do some careful soul-searching as to the fundamental underlying reasons. Whether ours is to be a cost vs. profits dilimma or a sales or sale policy vs. profits dilemma, it is nevertheless a very real one for individual companies—and it can be successfully solved only at the individual company level."

(*Complete text of Mr. Maxwell's*

1. John L. Landenberg, (l.) Ketterlinus Litho. Mfg. Co.; and E. Jones, Graphic Arts Corp.

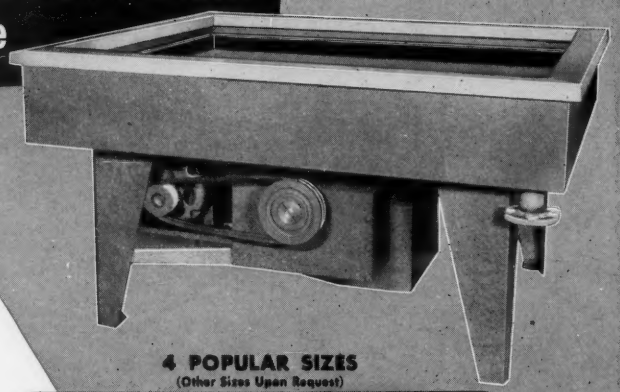
2. Bank Stationers group at the Monday night cocktail party.

3. (l. to r.) J. D. Morgan, duPont, Photoproducts department; Fred Marston, Kaumagraph Co.; Mrs. Marston; and Frank Garrett, duPont.

4. (l. to r.) Mr. and Mrs. George Thompson, Litho Chemical and Supply Co.; George R. Hoover, Jos. Hoover & Sons Co.; and Mr. and Mrs. Harry Grandt, Roberts and Porter.

5. (l. to r.) Norman Steed and Charles Kayser, Miehle Prtg. Press & Mfg. Co.; John Kronenberg, S. D. Warren Co.; and T. A. Greifzu, Graphic Arts, Inc.

"CHAMPION" Deep Etch DOWN-DRAFT Lithographers Work Table



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- Processing of plates on an everlasting smooth surfaced slate slab.
- Large heavy duty ball-bearing type built-in suction blower operates quietly and is belt driven by a standard speed motor.
- Reduces absenteeism.
- Tends to reduce insurance rates.
- Increases production.

4 POPULAR SIZES
(Other Sizes Upon Request)

No.	Slate Slab	Overall Dimensions (All 33½" High)	Exhaust Blower Capacity: Cu. Ft. Air Per Minute	Motor H. P.
1	30"x40"	42"x50"	2500	1
2	42"x50"	54"x62"	3200	1½
3	50"x60"	62"x72"	4200	1½
4	60"x80"	72"x92"	4800	2

SOME OF THE USERS OF "CHAMPION" EQUIPMENT

IN CHICAGO:
Jahn & Oliver Engraving Co.
Chicago Lithoplate Graining Co.
American Offset Co.
Collins, Miller & Hutchings
Superior Engraving Co.
R. R. Donnelley & Sons Co.
Central Type Setting Co.
Caspers Tin Plate Co.
American Can Co. (Maywood)
Eastman Kodak Co. Rochester, N. Y.
Gugler Litho Co. Milwaukee, Wis.
Conner Lithographers Detroit, Mich.
Hall Brothers Kansas City, Mo.
Epsen Litho Co. Omaha, Neb.
Atlanta Litho Co. Atlanta, Ga.
Crane Howard Litho Co. Cleveland, Ohio
Arrow Engraving Co. Cleveland, Ohio
Marathon Corporation Neenah, Wis.
A. L. Garber Co. Ashland, Ohio
Litho Plate Service Co. Toledo, Ohio
American Litho Co., Inc. Atlanta, Ga.
Ideal Litho Service San Antonio, Texas
Strobridge Litho Co. Cincinnati, Ohio
Lithographic Plate Service North Hollywood, Cal.

IN LOS ANGELES:
Mission Engraving Co.
Dillion Lithograph Co.
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Bridgeport Engraver's Supply Co.
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Toronto Type Founder Co., Ltd.
Latimer, Ltd., Toronto

"CHAMPION" Improved TEMPERATURE CONTROLLED Developing Sinks

MAINTAINS EVEN TEMPERATURE WITHIN A FRACTION OF A DEGREE

Features:

- Recirculating pump equalizes sink water temperature by forced flow of water around and under developing trays.
- Will maintain separate desired temperatures for sink trays (heating and cooling) and for storage compartment (cooling) to within a fraction of a degree of setting.
- Equipped with latest type hermetically sealed, trouble free refrigerating unit.
- In operation a continuous flow of water is not required. Result: no water wasted.
- Disposal trough for tray contents in back for convenience.
- High back splash, sink aprons, etc. constructed of polished stainless steel, heliarc welded.

#1	3 Trays	20x24 Film Size	32½" x 74"
#2	3 Trays	26x30 Film Size	39" x 93"
#3	3 Trays	30x40 Film Size	49" x 105"

. . . and other sizes available for your special requirements.

manufactured by **H. SCHMIDT & CO.**
ESTABLISHED 1891

317 S. Paulina St., Chicago 12, Ill. **SEeley 3-0404**

COLOR PHOTOGRAPH BY ANTON BRUEHL

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THE LOVE OF COLOR doesn't have to be learned. We arrive with it—and never lose it.

This simple fact can greatly increase the effectiveness of business printing. To take an example: HOWARD BOND comes in twelve colors which men call "attractive" and women call "pretty." These colors *please* people when they are used for price and catalog sheets, inter-office correspondence, special bulletins, and many other kinds of important business printing.

And when used for business forms HOWARD colors speed identification, minimize error, simplify handling and filing.

Have you ever seen all of HOWARD BOND colors side-by-side? If you haven't, ask your printer or paper merchant for a sample book. One look will mean more than all that we can say.

PRINTERS! *This message appears in advertising magazines read by your customers.*

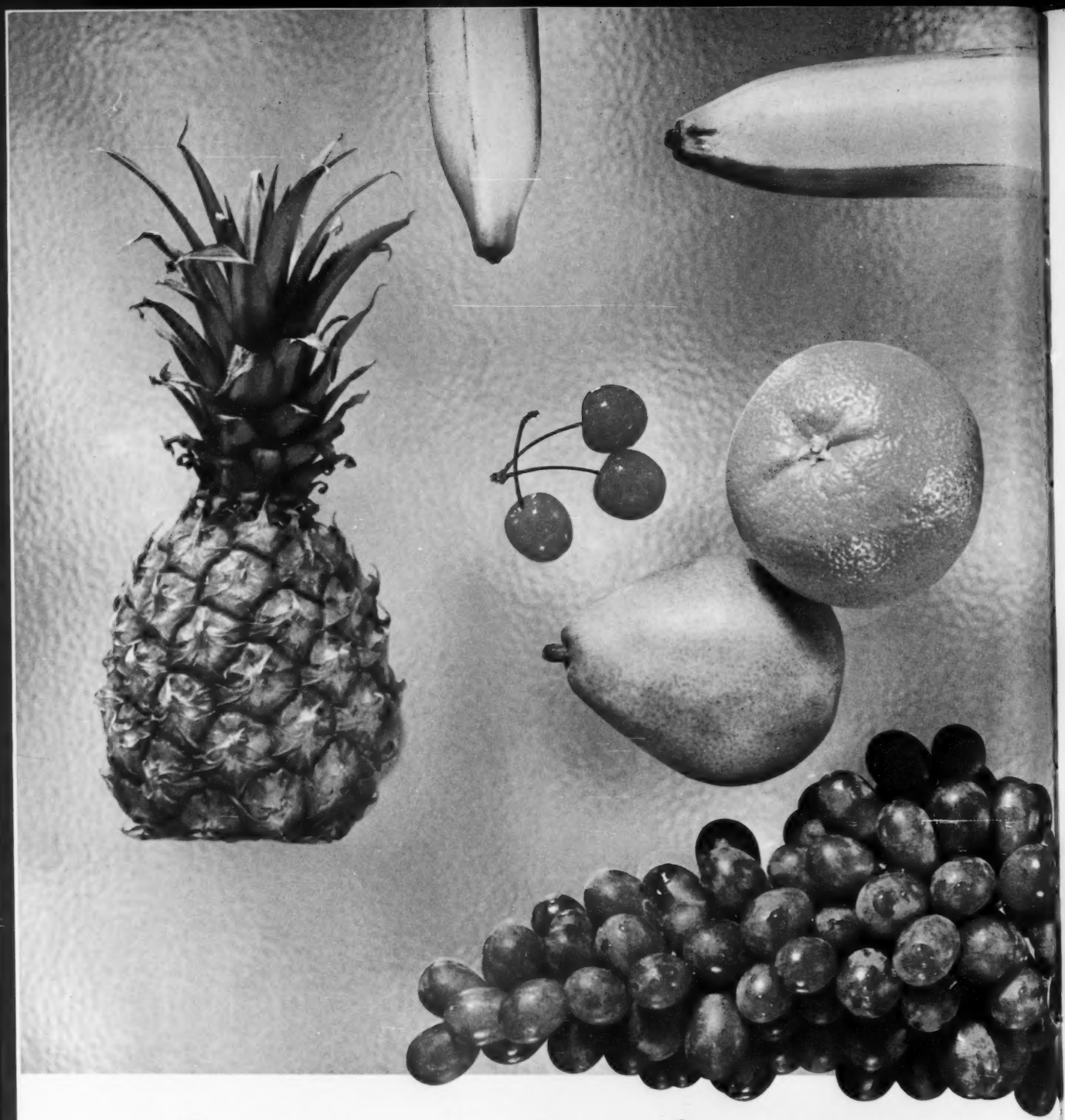
HOWARD PAPER MILLS, INC. • HOWARD PAPER COMPANY DIVISION, URBANA, OHIO

Howard Bond

"The Nation's Business Paper"

Companion Lines: Howard Ledger • Howard Mimeograph Howard Writing • Howard Posting Ledger

Printed on Maxwell Offset *substance 80 — Maxtone finish*



Doesn't color reproduce better on **Maxwell Offset?**

Howard Paper Mills, Inc. / MAXWELL PAPER COMPANY DIVISION / Franklin, Ohio

We'd be pleased to send you samples of our seven finishes and two tints

Printed on Maxwell Offset—*substance 80—Maxtone finish*

report may be found elsewhere in this issue.)

But if Mr. Maxwell had some misgivings about low profit margins in lithography, other speakers at the convention were eager to suggest ways by which lithographers could elevate their profits to the higher percentages enjoyed by other industries.

They presented their views during the three days of the convention, June 20-22, at the Lake Placid Club. Excellent food and fine accommodations, combined with the pleasant setting of the club on Mirror Lake, made the anniversary convention highly successful. Socially, cocktail parties, receptions, card parties, the annual golf tournament and the dinner on Wednesday evening, provided a full and varied program for members and their wives, of whom a large number attended.

Attracting a crowd each day was the exhibit of the 5th LNA Lithographic Awards Competition. (See the May issue of MODERN LITHOGRAPHY). Nearby the Stoessel check imprinting press, developed under the auspices of the bank stationers section, was put through its spaces, to demonstrate its advantages to the group serving banks.

Carl R. Schmidt, president of LNA, who welcomed the members to the convention marking the association's 50th gathering and 67th year, later was elected to head the association for another year.

Panel on Profits

Getting back to profits, four speakers presented ideas for raising them. Three of them spoke at the meeting of the Cost, Accounting and Financial Management committee, which devoted its session to the theme: "Profit Improvement."

The other speaker to consider this vital subject was Norris M. Perris, who spoke on "Weaknesses in the Personal Selling Approach." Mr. Perris, senior partner in the firm of Stevenson, Jordan & Harrison, New York, said that most lithographers use the personal method, often to their detriment.

After summarizing selling problems in several litho plants (which he did not mention by name), Mr. Perris showed how these plants might profit by adopting an impersonal approach. Or, under optimal conditions, he said a combination of the best aspects of each method is desirable.

"You should have a sales manager who manages, and who does no selling," he advised. The speaker listed six situations common to the personal approach which he considered bad:

1. The salesman is supreme over the company, with the result that the customer tends to consider all companies as equal, with differences only in the company representatives.

2. Because of the influence of the salesman on company policy, an uneven price situation often develops.

3. The salesman determines which accounts he should handle and how many ("often too many to service effectively.")

4. Each salesman appraises his own market, but often he is incapable of doing this intelligently.

5. The salesman allots his own time. ("He's a poor judge of where to spend it.")

6. The company must accept many orders, to please a salesman, which it logically should turn down.

Contrasted with this approach, said Mr. Perris, is the impersonal approach, which has the following advantages:

1. Customer buys because of company's reputation, not because of the salesman.

2. Management can integrate sales activities with the rest of the business.

3. Customers can be rated by desirability and profit potential.

4. Customers can be alloted judiciously to the various salesmen.

5. Specific goals can be set for each salesman.

The profit situation was reviewed from three points of view at the profit improvement session of the Cost, Accounting and Financial Management committee. Speakers approached the subject from the standpoints of sales, production and financial management.

Complete text, with charts, of Floyd Maxwell's talk: "Survey Report on Lithographic Profits for 1954," will be found on page 52.

Profit Potential

Considering the profit potential in a sound sales policy was John M. Wolff Jr., of Western Printing & Lithography Co. Andrew Donaldson, Strobridge Lithography Co., talked about production, while Harold E. Rowles, Stecher-Traung Lithograph Corp., discussed financial management. Everett F. Bowden, chairman of the committee, presided, and Ernest W. Jackson, Steck Co., summarized the various viewpoints after a question period.

"Lithographers first should establish a sound sales policy, then have the courage to follow it through." That was the crux of Mr. Wolff's address. He pointed out that the litho field is noted for high skills and technological improvements, but, he said, "we still are using horse and buggy selling methods."

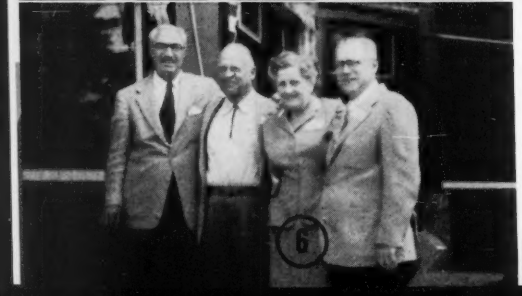
"Too many salesmen are merely price quoters," he added, "and their methods of selling aren't keeping pace with the methods of production." Mr. Wolff blamed top management for the situation, and went on to offer these suggestions for establishing a sound sales policy:

1. Study your business and find out what you can produce profitably.
2. Study the market.
3. Study your customers — determine which you can serve profitably.
4. Study your competition.
5. Study your own selling techniques.

Planning a sales policy depends on having a profitable picture in all five areas, he warned. After that has been determined, emphasis should be on following through—on training salesmen in the best methods of selling lithography.

By explaining in detail his company's program of quality control, Mr. Donaldson told the audience how they could increase their profits by keeping a close watch on production methods.

"Your greatest investment is the pressroom," he said, "so all produc-



tion problems must be solved with the efficiency of the pressroom in mind." He added that pressroom performance depends on plates and planning. After enumerating the various problems and solutions in the plate department, the speaker went on to consider the importance of planning the individual job to assure that it is done profitably.

Two projects underway at Strobridge give promise of attaining even better quality control, he said. One is a check list for press makeready, which will protect against time-wasting duplications and dangerous omissions in this phase of production.

The other is a program of ink standardization. "We believe we can eliminate all press and drying troubles stemming from ink and save 90 percent of the matching time with these new standards. By using these inks we are standardizing fountain solutions," he declared.

After you have gotten sales and production on a sound and profitable basis, you still can make improvements. According to Mr. Rowles, you can cut innumerable costs by wise financial management. He listed such seemingly trivial items as cash on hand, accounts receivable, inventories and accounts payable as sources of additional funds. Surplus cash should be wisely invested, loans should be postponed until actually needed, discounts in purchasing should be obtained, inventories should be constantly checked and a tight credit policy should be maintained to gain additional revenue.

"Review, revise, reject should be the 'three r's' of the financial management program," he advised. "Don't be afraid to discard practices that have been shown to be unprofitable."

LTF Report

Akin to profit improvement, and an important factor in creating it, is the somewhat nebulous thing called quality. It came in for careful consideration — and consideration on a practical, how-to-do-it level — during the Tuesday morning program. Members of the Lithographic Technical Foundation repeated their popular program from last year's convention on this subject.

J. Louis Landenberger, president of LTF, explained what the Foundation is trying to do to improve quality. James G. Strobridge, chairman of the Industry Relations Committee, introduced Mike Bruno and Charles Shapiro, who brought LNA members up to date on developments since the last convention.

Mr. Bruno talked about the trend toward better lithography, by comparing specimens from 1940 with a sheet produced last year. He also highlighted LTF's work with such things as lighting, pick testing, copper plating of aluminum (and, more recently, zinc), plate making, masking, three-color offset, vignetting and dampening.

"We have always advised lithographers against using color charts unless they are produced with the same ink and paper and under the same conditions as will be used in the pressroom," Mr. Bruno stated. "Therefore, we are at work on a simple color chart that we think will answer this need for many lithog-

1. Mr. and Mrs. Les Reiss (l.) and Mr. and Mrs. Dave Schulkind, E. P. Lawson Co.

2. (l. to r.) Mr. and Mrs. Wm. Carroll, Sinclair and Carroll Co.; Mr. and Mrs. M. S. Burroughs, Dexter Folder Co.; and John Rasmussen, Amsterdam Continental Types and Graphic Equipment, Inc.

3. (l. to r.) Herb Livesey, National Assoc. of Printing Ink Makers; Ren Perry, Harris-Seybold; Norman Mack, Norman Mack, Associates; and Carl Loefgren, Harris-Seybold.

4. (l. to r.) Mrs. John Devine; Gerry Mathison, Michigan Litho Co.; Art Hitchings, Forbes Lithographing; and John Devine, Howard Flint Ink Co.

5. (l. to r.) W. S. Reed, Dexter Folder; John Devine, Howard Flint Ink Co.; Harvey Glover, Sweeney Lithographing; and George Swart, New York.

6. (l. to r.) Robert Heywood, Sr., R. R. Heywood Co.; E. B. Davis, Ideal Roller and Mfg. Co.; Mrs. Nilles and Ben Nilles, Ideal.

raphers." He said it will contain four tones of each color and black. He said the group also is trying to pin-down quality so that it can be expressed in terms of numbers.

Mr. Shapiro summarized LTF's program from the educational standpoint. "Having improved techniques, we must disseminate the information and make sure it is actually put to use in the litho shop," he said. This is done by means of bulletins, booklets, training guides and training materials. It is helped also by LTF technical forums, the latest of which attracted 700 persons in the Twin Cities (See June MODERN LITHOGRAPHY).

Management must demonstrate its interest in applying this research and must have an awareness of what is going on in the field if it is to be utilized profitably, he concluded.

LTF displayed some of its tools and equipment in the Lake Placid Club during the convention.

Work Simplification

Tied in with profit improvement and quality control is the expanding field of work simplification. A talk on this topic captured the attention of the LNA audience and was one of the best received addresses at the meetings. George W. McSweeney, president of DeLuxe Check Printers, Inc., Chicago, gave the talk.

Stressing the human factor, Mr. McSweeney said it is important to distinguish between people and machines, and to think of work simplification as distinct from work speedup. He said the following four things are essential to the program:

1. State your objectives honestly to your workers. Keep the accent on comfort and reduction of fatigue, and profits will improve automatically, he asserted.

2. Be sensitive to change. (Work simplification is never ended.)

3. Keep the plant clean and have a realistic attitude toward expenditures in the simplification program.

4. Consider people first. "In this time of automation we need a blending of management and labor. We need to make people like one another," he told the group.

Other Committees

In the course of the convention, the major committees of the association considered problems pertinent to them. In addition to the committee meetings comprising the regular open sessions, three groups — the Labor Relations committee, the Trade Platemakers section and the Bank Stationers committee — held closed meetings to air their problems.

Ed Tyng, banking editor of the *Journal of Commerce*, was featured speaker at the latter meeting. This was his forecast for the future: "... I believe we can expect, this year, the largest number of bank consolidations since 1931, followed by a substantial number in the following year, and then perhaps a tapering off, unless there are changes in the laws to facilitate mergers, or changes in economic conditions which will maintain the present state of urgency."

He went on to describe the reasons for mergers, legal and economic, and said he was sure "that all of you can do some pretty accurate forecasting

(*Continued on Page* 30)

1. (l. to r.) Mrs. Wm. Kingsley; Matt Leckey, Sinclair & Valentine; Bill Kingsley, Providence Litho; and Mrs. Leckey (sitting).

2. Mrs. George Lamonte, Jr. and George LaMonte, Sr.

3. (l. to r.) N. T. Steed, Miehle Prtg. Press & Mfg. Co.; William Walters, U. S. Printing & Lithographing Co.; and Harry Porter, Harris Seybold.

4. (l. to r.) Mrs. A. Donaldson; Andrew Donaldson, Strobridge Litho; Fred Adame, R. Hoe & Co.; David E. Shotwell, Interchemical Corp. and Mrs. Shotwell.

5. (l. to r.) Mr. and Mrs. R. N. Kauffman, H. S. Crocker Co.; Al Rossotti and Mrs. Rossotti, Rossotti Lithographing; and Mr. and Mrs. William Recht, William Recht Co.

Ted Broadston, Harris-Seybold, cranks the auto for Mrs. Henry Nygren (Nygren-Dahly Co.), and Byron Davis, Ideal Roller & Mfg. Co.

of bank mergers . . . in your home districts."

Also at the Bank Stationers luncheon meeting, Cecil N. Rudnick, reported on his committee's work in developing an improved imprinting machine. The machine itself was on display at the hotel. Fred J. Kraemer Jr., section chairman, presided.

Ernest E. Jones, who heads the platemakers section, led a general discussion at that group's meeting. Later in the convention, Mr. Jones was awarded a testimonial for his activities in advancing the work of LTF. (This award originally was made at the annual LTF meeting in Chicago by Mr. Landenberger.)

The third group, concerned with labor relations, heard talks on "Lithographic Employer-Employe Programming." Speaking on the subject were Charles A. Conrard, Western Printing & Lithographing Co., Arthur L. Johnson, executive director of Graphic Arts Association of Wisconsin and William H. Bulkeley, Kellog & Bulkeley Div., Connecticut Printers, Inc. Chairman Paul H. Lyle presided.

Labor Relations

The general area of worker relations was explored by speakers at the concluding LNA session Wednesday morning. Quentin O. Young, LNA director of industrial relations, reviewed negotiations with 87 member plants and collective bargaining agreements in 16 areas of the lithographic industry during the past year.

Two speakers were concerned with the topic "Communciations—the Labor-Management Catalyst." They were Robert P. Roper, vice president and director of industrial relations, Philip Morris, Inc., New York, and Dwight J. Thomson, vice president and director of industrial and public relations, Champion Paper & Fiber Co., Hamilton O. Mr. Lyle also served as chairman of this meeting.

Emphasis on People

Mr. Roper described his company's program of communications with its emphasis on people, not machines, and listed four ways of "talking it over" in his company: management behavior (instructions in simple terms), participation (group meetings), public relations, and company publications.

Mr. Thomson approached the subject by telling about his company's two years of experience in developing a new profit sharing plan. He said the program has worked well, and credited a good communications setup with helping it succeed.

A unique experiment in personnel problems was explained by the Rev. Clifford H. Peace, pastor-counselor, R. J. Reynolds Tobacco Co., Winston-Salem, N. C. His unusual task of applying religion to help solve these problems started in 1949.

Other Officers

Serving under Mr. Schmidt in the coming year will be Carl N. Reed, president of the Niagara Lithograph Co., Buffalo, N. Y., who was elected vice president to succeed Arthur R. Hitchings, chairman of the board and treasurer of the Forbes Lithograph Mfg. Co., Boston.

W. H. Walters, president of the United States Printing and Lithograph Co., who served as LNA President for two years prior to Mr. Schmidt's election in 1954, was reelected chairman of the board. Maurice Saunders was also reelected honorary chairman of the board.

Other officers reelected were L. E. Oswald, The E. F. Schmidt Co., Milwaukee, Wisc., treasurer; W. Floyd Maxwell, LNA Executive Director; Edward D. Morris, secretary; and Quentin O. Young, counsel.

Newly-elected directors were George C. Kindred, Kindred, MacLean & Co., Long Island City; Edward E. Loebe, The Regensteiner Corp., Chicago; Charles H. Waldhauer, United States Playing Card Co., Cincinnati; John M. Wolff Jr., Western Printing and Lithographing Co., St. Louis and William E. Zabel, Jr., Zabel Brothers Co., Inc., Philadelphia.

Honorary directors elected include: Charles W. Frazier, Brett Lithographing Co., Long Island City; Ernest W. Jackson, The Steck Co., Austin, Tex.; George E. Loder, Western Printing & Lithographing Co., New York; Randolph T. Ode, The Providence Lithograph Co., Providence, R. I.; and Horace Reed, Niagara Lithograph Co., Buffalo, N. Y.

Sidelights at LNA

Harris-Seybold Co. had a novel tie-in idea with the 50th anniversary convention. They took photos of conventioneers in a 50-year-old auto owned by "Bud" Heywood. Then the models, who had posed in linen "dusters" common in 1905, saw their pictures in a gold folder which explained that 50 years ago, when the car was new the first Harris offset press was also in production.

* * *

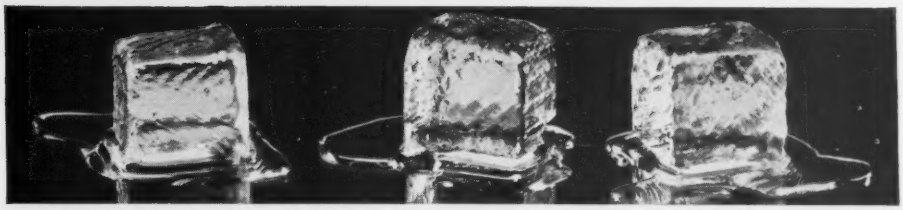
Three pleasant cocktail hours were sponsored by the Suppliers Social Activities committee. Two were in the Lake Placid Club, while the third was given on the lawn of the nearby golf club house, which commands a fine view of the surrounding mountains.

* * *

John McMaster, employed full time at Eastman Kodak and part time with his own movie camera, delighted the members with a program called "See Yourself in the Movies." Ham "actors" in the association saw themselves in action at recent LNA conventions. John added some films of a western trip to fill out the program.

* * *

Three exhibits vied for the attention of members in the lobby. Featured was the exhibit of winners in the 5th awards competition. Also on view was the new check imprinting press developed with the advice of LNA's Bank Stationers Section, and a group of tools and instruments used by the Lithographic Technical Foundation.



"3 Cubes in the Fountain"

"3M" Beats Heat and Humidity in the Plate!

"When the pressroom temperature gets up into the 90's . . . an old trick that helps is to put two or three ice cubes in the fountain" — **L. T. F. Research Progress Report #31.**

If you've ever resorted to makeshift fountain coolers when temperature and humidity hit the 90's, you need "3M" Photo Offset Plates. Made of *grainless* aluminum, "3M" Plates are not affected by heat and humidity. The old troubles of oxidation, toning and scumming are worries of the past. Humid weather or not, exposure and development time *and quality* remain constant. Because "3M" Plates are pre-sensitized, they can go from package to press in a few minutes without any special equipment.

SEE A "NAKED TRUTH" TEST IN YOUR PLANT

A revealing, proof-positive demonstration of "3M" Brand Photo Offset Plates' superiority over conventional surface-coated plates can be arranged without cost or obligation. See for yourself the "Naked Truth"... mail the coupon below TODAY.

MINNESOTA MINING & MFG. CO., DEPT. ML-75, ST. PAUL 6, MINN.

Please arrange for a "Naked Truth" test in my shop without cost or obligation.

"Humid or Hot — They Hold the Dot"

3M Photo Offset Plates

BRAND

World's Largest-Selling Sensitized Aluminum Photo Offset Plates

We have a _____ press. Position _____

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News ABOUT THE TRADE

Std. Register Buys Sunset-McKee

Standard Register Co., Dayton, O., has purchased controlling interest in Sunset-McKee Co. of Oakland, Calif., one of the West's leading manufacturers of business forms. More than $4,000,000 was involved in the transaction according to Frank H. Abbott, Jr., president of Sunset-McKee.

Sunset - McKee, established thirty years ago through the consolidation of several firms in the business form manufacturing line, becomes the Pacific division of Standard Register. Mr. Abbott, principal stockholder of Sunset-McKee, and Wm. H. Fischer, executive vice-president of the company, are remaining with the firm in an advisory capacity. The plant is fully equipped for both lithographic and letterpress production.

•

U. S. Litho President Dies

R. W. Thomas, president of U. S. Lithographing Co., Evanston, Ill., died on May 25 in Evanston. Born in Fort Dodge, he lived in Des Moines for 15 years before moving to Canada in 1927. He returned to this country shortly after to become president of U. S. Litho. He was 52.

•

ANPA Hears Donnelley Official

Walter R. Smith, manager, employee activities and safety, R. R. Donnelley & Sons, Co., Chicago, spoke to the American Newspaper Publishers Association's 27th mechanical conference in Chicago last month. "Safety in Printing Plants" was Mr. Smith's topic.

Howard Flint Opens New Factory in Cleveland

Howard Flint Ink Co. announced the opening last month of its newest factory in Cleveland, located at 3905 West 150th St. E. B. Flint, president, stated that the large tonnage consumed throughout Ohio and Pennsylvania, previously produced in Detroit, will now be transferred to the new Cleveland plant.

Dan Farlin will manage the new Cleveland factory and William Sticklorath is in charge of development and production. Howard Flint's new Paterson, N. J. plant was just opened last month (see **ml.** June, P. 97)

Offset at Craftmen's Convo

"Offset-Litho, Gimmicks, Gadgets and Instruments," by James Kane, Success Printing & Lithographing Co., Indianapolis; and "Offset Printing of Cartons and Labels" (speaker to be announced) are on the program of the Craftsmen's convention, Netherland Plaza Hotel, Cincinnati, Aug. 7-10.

Some other topics for discussion on the agenda are:

All processes: "Preventive Maintenance of Your Printing Equipment," Russell Annes, Gardner Board and Carton Company, Middletown, O. "The Humanics of Quality Control," B. E. Sooy, Wolvering Carton Co., Grand Rapids, Mich.; "Safety Programs," Peter Bernard, chairman, International Safety Committee, New York; "What Package Wants from the Printer," William Rommey, Procter and Gamble Co., Cincinnati.

Human Relations: "The Dynamic Power in You," John D. Corrigan, New York; "Lamp Lighters," Kenneth McFarland, Topeka, Kan.

Club Management: "Philosophy of Management of Local Clubs," Herbert Livesey, executive secretary, National Association Printing Ink Makers; "Club Program on How Our Business System Operates," Wm. F. Gutwein, chairman, supervisory training committee.

Printing Week: "The Michiana Printing Week Story," Rawson H. Murdock, Jr., South Bend, Ind., chairman, 1955 Printing Week Committee; "What Are You Doing about Printing Week?" Floyd Larson, Printing Week chairman.

•

Harris-Cottrell Join Offices

The Cottrell Co.'s New York sales office was recently consolidated with Harris-Seybold Co.'s New York sales and service office at 380 Second Avenue. Cottrell, a subsidiary of Harris-Seybold, had previously maintained its office at 230 Park Ave.

Ren R. Perry, vice president of sales for Harris-Seybold and S. C. Saunders, Cottrell's sales vice president, made the announcement last month.

Cummings Is H&H Manager

Carleton R. Cummings has been named sales manager of Herbick & Held Printing Co., Pittsburgh. He

Carleton R. Cummings

fills a position left vacant since the elevation of William G. Forster to the presidency of the firm (see *ML* May, page 80).

Mr. Cummings was formerly vice president of General Paper Corp., and editor of the company's publication, "General Topics."

•

Carnegie "Back to School" Conf.

Twin meetings at Carnegie Institute of Technology, Pittsburgh, are scheduled for July 3-8. The 30th Annual Conference on Printing Education of the International Graphic Arts Education Association and the annual membership meeting of the Education Council of the Graphic Arts Industry, Inc., listed programs of interest to lithographers as follows:

All sessions are at Morewood Gardens Dormitory.

Monday, July 4

Opening Session: Chairman, Kenneth R. Burchard, president, International Graphic Arts Education Association; Keynote address, "Progress in Graphic Arts Education," by Samuel M. Burt, executive secretary, International Graphic Arts Education Association, and Education Council of the Graphic Arts Industry, Inc.

Luncheon: Chairman, John M. Fontana, chairman, Printing Education Week Committee; Address, "1950—The Benjamin Franklin Year," by Herman Jaffe, graphic arts consultant, New York, N. Y.

Tuesday, July 5

Technical Clinics: General Chairman, Homer E. Sterling, School of Printing Management, Carnegie Institute of Technology; composition, letterpress, lithography, design.

Dinner: Chairman, George M. Halpern, New York City Community College, Brooklyn.

Wednesday, July 6

Technical Clinics: General Chairman, Homer E. Sterling, School of Printing Management, Carnegie Institute; composition, letterpress, lithography, design.

Luncheon: Chairman, Lewis A. Nugent, Chief of Reproduction Div., USAF Aeronautical Chart and Information Center, St. Louis, Mo.; Address, "Training Printers for the Armed Services," Harry Kamien, Department of the Navy, Wash., D. C.; Address, "Training Printers for the Army Engineers," Capt. Harold N. Acrivos, Chief, Reproduction School, Dept. of Topography, Fort Belvoir, Va.

Technical Clinics: Afternoon Session, General Chairman, Homer E. Sterling, School of Printing Management, Carnegie Institute; composition, letterpress, lithography, design.

Thursday, July 7

ANNUAL MEMBERSHIP MEETING OF THE EDUCATIONAL COUNCIL IN JOINT SESSION WITH INTERNATIONAL GRAPHIC ARTS EDUCATION ASSOCIATION:

Morning Session: Chairman, Robert H. Caffee, Wm. G. Johnston Co., Pittsburgh; "Insuring the Future of Local Education Programs," Harry L. Gage, graphic arts consultant, Gloucester, Mass.; "The Committee Approach to Local Education Needs."

Luncheon Session: Address, "Opportunities in the Graphic Arts," by Hon. Raymond Blattenberger, Public Printer of the U. S.

Afternoon Session: Chairman, Robert H. Caffee, Wm. G. Johnston Co., Pittsburgh; "The Effect of Automation on Future Education and Training Program"; "Our Future Teamwork," George S. Dively, president, Harris-Seybold Co., Cleveland, and vice-president, Education Council of the Graphic Arts Industry.

Banquet: Address, "As Others See Us," William H. Walling, president, Printing Industry of America.

Friday, July 8

International Graphic Arts Education Association: Chairman, Kenneth R. Burchard, president, IGAEA. Committee Reports and Special Reports:

1) 31st Annual Conference on Printing Education, 2) New Developments at Columbia University—Graphic Arts Education Program, 3) New Developments at School of Printing Management, Carnegie Institute of Technology, 4) New Developments at Department of Printing, Rochester Institute of Technology, Rochester, New York, 5) Development of Visual Aids in Graphic Arts Education, 6) The P. I. A. Printers and Lithographers Self-Advertising Travelling Exhibit to Schools, 7) New Developments in Graphic Arts Education at Ryerson Institute of Technology, 8) New Developments in Graphic Arts Education in Puerto Rico.

Afternoon: Visit to plant of Miller Printing Machinery Co., Pittsburgh.

Barry Litho Division Head Named

John F. Mailer has been appointed supervisor of the newly-established lithographic division of the James H.

John F. Mailer

Barry Co., San Francisco printers and publishers.

Prior to joining Barry, Mr. Mailer was associated with the Recorder-Sunset Printing and Publishing Co., San Francisco, as superintendent of its lithographic department. Before this, he spent several years in Hawaii as assistant to the plant superintendent of the Honolulu Lithographic Co. Mr. Mailer also served as plant manager of Calcutta Chromotype, Calcutta, India, in charge of both letterpress and lithographic departments, and as plant superintendent of Ronalds Printing and Publishing Co., Montreal, Canada.

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Lithoman Gets Presidency

Luther M. Child, Jr., superintendent of Offset division, Cuneo Press of New England, Inc., Cambridge, Mass., was elected president of the Graphic Arts Institute of New England at its annual luncheon meeting June 15, Boston. Other officers elected were: Addis W. Dempsey, president-treasurer of Donovan & Sullivan Engraving Co., Boston, re-elected assistant treasurer; Col. Howard S. Patterson, secretary-manager; Arthur T. Howard, president of A. T. Howard Co., Boston, as two-term retiring president; and Donald C. Hagar, president-treasurer, Rapid Service Press, Inc., Boston, re-elected treasurer. John H. Porter was elected vice president.

Direct Mail Ad Contest

Six direct mail functions will be the basis for judging the "Best Direct Mail Advertising of 1955" Contest, chairman Robert B. Clark, advertising manager, Strathmore Paper Co., West Springfield, Mass., announced recently.

1) Creating More Effective Personal Sales Contacts: includes direct mail advertising which creates a specific opportunity for salesmen to call

by getting inquiries or leads for personal follow-up.

2) Bringing the Prospect to You: applies particularly to the retail field and to service businesses like banks which do not have sales forces.

3) Delivering Background, Sales or Public Relations Messages to Customers, Prospects, Employees or Other Special Groups: includes any prestige reminder or goodwill advertising, employee relations, stockholders relations, general public relations, or anything to influence selective groups along certain lines of thought or action, but without direct response being sought by mail or without any direct personal follow-up intended.

4) Taking Actual Orders by Mail: function is direct mail selling or mail order selling, where every step in the sales process, from the initial contact to the final sale is done exclusively by mail.

5) Securing Action from the Prospect by Mail: covers any promotion intended to secure response or action by mail, but not designed to secure an order or result in a personal contact, between the prospect and the advertiser.

6) Conducting Research and Market Surveys: covers every phase of research, investigation and fact-finding by mail.

Direct Mail which has been prepared or used during the period of Aug. 1, 1954 and July 31, 1955, may be submitted under one of these functions. Deadline for entries in the Contest is July 31st. Each "Best Direct Mail Advertising of 1955" winner will receive a suitably inscribed plaque. A special Gold Mailbox Trophy will be presented to the one winner whose campaign is judged the most outstanding of all submitted. All contest winners may name up to five suppliers, individuals or organizations who helped create the prize-winning campaign, to receive Certificates of Achievement. In addition, all entries are eligible for the Henry Hoke Award, to be selected by the judges as the most unique or courageous example of solving a difficult problem by direct mail.

Public announcement and presentation of awards will be made at the Winners' Breakfast on Sept. 12, at the DMAA Convention, Morrison Hotel, Chicago.

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RCS Buys Toronto Box Plant

Rolph-Clark-Stone Ltd., Toronto, has purchased Automatic Paper Box Co., Toronto and will operate it as a subsidiary, F. Grenville Rolph, RCS president announced last month. Frank Shannon continues as president of Automatic Paper Co. whose board will be enlarged to include several RCS directors.

In another announcement H. A. Ellam was named manager of a newly created research and development division.

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Epps in Atlanta For C&G

William C. Epps was advanced to Atlanta division sales manager, Cullom & Ghertner Co., printers and lithographers of Nashville, Tenn., and Atlanta, Ga., it was announced last month by Alven S. Ghertner, president.

Mr. Epps has been a member of the firm since 1938.

ATF Names Marketing Director

J. C. Carr, formerly advertising manager for American Type Founders, Inc., has been named director of marketing, according to a recent announcement by R. A. Tobias, vice president in charge of sales. This position was formerly held by Mr. Tobias, prior to his appointment as vice president of sales. Hugh McGill will continue as the manager of Market Research under the direction of Mr. Carr.

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C &G Man Named NACA Director

A. W. MacDougall, assistant treasurer of Cullom & Ghertner Co., Nashville, was elected a director of the National Association of Cost Accountants at the annual convention, in New York, June 19-23. He has been with Cullom & Ghertner since 1953.

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Melvin with ABC

James Melvin has recently become associated with the A.B.C. Lithoplate & Graining Service, Inc. He was formerly with Regensteiner Corp. and Newman Rudolph Co.

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Crocker Consolidates on W. C.

H. S. Crocker Co., San Francisco, has named Ivan Giusti as sales manager for the Northern California area. This move consolidates activities in-

I. Giusti T. Leach

volving packaging, advertising and commercial lithography in the territory. Assisting Mr. Giusti will be Thomas Leach who will have the responsibility for sales promotion. Both men have been associated with H. S. Crocker in sales capacities for several years.

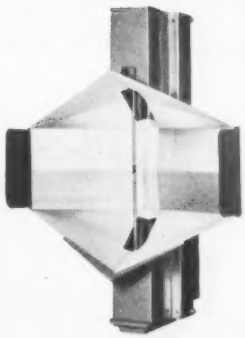
To accommodate its new folding carton manufacturing (from Rosotti Lithograph's San Francisco plant, see ML, May) the company has recently completed a $200,000 addition to its plant facilities in San Bruno.

The Strong Team

cuts plate-making exposure time in half

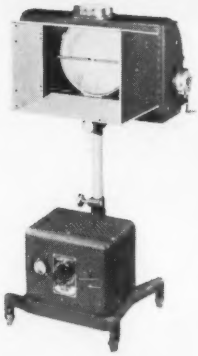
Challenger Camera Arc Lamp

Vertical trim. Burns at 75 amperes and 23 volts at the arc. Readily mounted on lamp support arms of any camera.



Grafarc 140 Ampere Printing Lamp

For use with vertical printing frames 40″ x 50″ and larger.



Grafarc 95 Ampere Printing Lamp

For use with vertical printing frames under 40″ x 50″.

Strong Grafarc Arc Lamps

FULLY AUTOMATIC • HIGH INTENSITY

- ★ **Uniform coverage of large areas.**
- ★ **Constant color temperatures.**
- ★ **Power to punch through dense Kodachromes.**
- ★ **Accurate control of densities, regardless of line voltage variations.**
- ★ **Sharper reproduction.**
- ★ **Eliminate illumination variables.**
- ★ **Eliminate dot undercutting.**

Overhead model printing lamps available for use with horizontal printing frames. Burn in normal position, avoiding smoking of reflector and preventing ash from depositing on surfaces in the light path.

Models for Monotype Huebner MH photo composing machines assure precise control of intensity for accurate repeats.

Send for free literature
or arrange for a demonstration by your dealer.

THE STRONG ELECTRIC CORPORATION

17 CITY PARK AVENUE • TOLEDO 2, OHIO

Please send free literature on Strong Grafarc Lamps.

NAME _____

FIRM _____

STREET _____

CITY & STATE _____

NAME OF SUPPLIER _____

A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

Five-Minute Safety Talks

A new training program for foremen and employees "Five-Minute Safety Talks," is offered by the National Safety Council. According to

the Council, more than 100,000 copies have been purchased by NSC members and the series is now being offered to non-members.

A 16-week safety course, using the Safety Manual for the Graphic Arts Industry as a textbook, was recommended by the executive committee of the Printing and Publishing section, NSC, at its meeting in St. Louis, June 9-10. The group studied safety practices in the plants of Von Hoffmann Press and American Folding Box division of Central Fibre Products Co. Also, a series of 41 safety instruction cards has just been released for printing plant employees.

•

William G. Adams Retires

Formerly vice-president of Einson-Freeman Co., Long Island City, William G. Adams retired from the company June 1. Prior to his association with Einson-Freeman, Mr. Adams was advertising manager of the Owl Drug Co., on the west coast.

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Lithoed Books Get Top Honors

Seventeen of 35 books receiving the highest scores and given top honors" in the sixth annual exhibition of Chicago and Midwestern Book Making were done entirely or in part by offset. The exhibit, sponsored by the Chicago Book Clinic was held in the Chicago Public Library during May. More than 200 trade, text, subscription, reference and sponsored books were submitted by 77 publishers for consideration in the competition. Six of the 35 winners were produced by R. R. Donnelley & Sons Co., and three were done by Rand McNally & Co.

Other lithographers responsible for either the text, end sheets, covers, or inserts in the winning group included: Edwards & Deutsch Lithographing Co.; Excello Press; Manz Corp.; Newman Rudolph Lithographing Co.; Regensteiner Corp.; Weber Lithographing Co.; Mid-City Lithographers; Photopress, Inc.; George F. McKeirnan & Co. and Inland Press.

Type for a winning Donnelley book, "History of Nebraska"', published by University of Nebraska Press, was composed by Fotosetter.

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Ideal Opens New England Office

Terminating a former agency arrangement with Wild & Stevens, Inc., Ideal Roller & Manufacturing Co., Chicago, has opened a new branch office at 32 Church St., Wellesley, Mass. Edward Bellone and Joseph Avery will handle sales in the New England area from the new office.

Davy Crockett on PS Label

Capitalizing on one of the nation's current crazes, Allen Hollander Co., New York, has introduced Davy Crockett labels with pressure sensitive or gummed backing. These bear-skin-on white labels can be used for toys, sportclothes, novelties, emblems and as tie-ins for campaigns.

TV Star to Give PIA Awards

Peggy Wood will present the Benjamin Franklin statuettes and other prizes at the fourth annual Printing Industry of America, Inc., convention in Atlantic City, Oct. 15-20. Miss Wood is star of the "Mama" TV show, and also is the wife of William H. Walling, president of PIA and chairman of the board and partner of Rogers, Kellogg and Stillson, New York. Closing date for entries in the fourth annual contest is Sept. 23, and these entries can be for campaigns (three or more pieces of advertising used within a 12-month period) or for individual specimens of self advertising.

Southwestern Litho Clinic Brings 508 to Two-Day Meeting

A ballroom-full of lithographers saw a day-long television program Saturday that might be entitled "Here's Your Line."

Lithographers from Texas, New Mexico, Oklahoma, Arkansas, and Louisiana met in the Grand Ballroom of the Adolphus Hotel, Dallas, for the opening session of the Fifth Annual Southwestern Litho Clinic, June 11. Theme of the two-day meet was "Four Color Process—From Photograph to Press." Delegates saw Four Color Process work with the aid of a closed circuit television set-up relaying the complex work done on the ballroom stage to the delegates seated in the ballroom.

Ken Carson, Eastman Kodak Co. specialist, began the morning session and snapped a color photo of Mrs. June MacKinstry, who is "Miss Lithography of 1955." Her photograph was processed by Eastman representatives and the negatives were masked and separated for the second phase of the process directed by Paul Braman, Eastman's Dallas technical representative.

Third phase of the four-color processing, dot etching, was started in the afternoon by John Van Es, Dutch-born engraving expert, and Loren Kennedy, both of Kel Litho Artists Corp., Wichita, Kan. The guide to whether the finished negative will be correct—colorwise—is the dot etcher's experience and his copy of the original photo, said Mr. Van Es. "Much of the color patterns are lost in the making of the negative," he continued, "I have to make them correct."

Negative stripping, the fourth process, finished the demonstration. O. L. Russell and George Totten, Taylor Publishing Co. of Dallas, directed the process.

Sunday morning the clinic resumed with experts demonstrating the last two phases of the operations—plate making and presswork. Joe Miller and Ed Grissom of Dallas supervised the plate making. Bill Shrode, also of Dallas, did the presswork. The four-color offset lithographs—result of a day-and-half operation, were distributed to the delegates.

Warren's FotoPlate

(PRE-SENSITIZED)

DELIVERS THE FINEST REPRODUCTIONS OF HALFTONES WITH ECONOMY

BETTER PAPER—BETTER PRINTING

REG. U. S. PAT. OFF.

Warren's STANDARD

Printing Papers

Lithographers state that the use of FotoPlates allows them to get more good plates made and on press in a working day.

For additional details and instruction booklet, consult any FotoPlate distributor, or communicate with manufacturer's headquarters: S. D. Warren Company, 89 Broad Street, Boston 1, Massachusetts

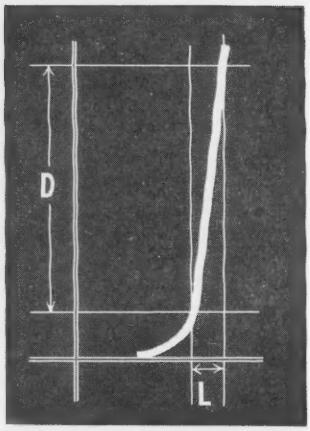
never before... film and plates with emulsion like...

GEVAERT
LITHOLINE ORTHO

you get 12 important benefits!

Extra-thin, fine grain LITHOLINE ORTHO emulsion assures uniform performance at high speeds and accurate fidelity of detail in black and white and color . . . fine dot and highlight dot pick up pin-point sharp. All down the line, camera to darkroom, LITHOLINE ORTHO improves the quality of your work. You can print negatives right through the back, image side to the light. No loss of sharpness with LITHOLINE ORTHO. The image is reversed laterally, eliminating the need for prisms during exposure.

Dot etching is sure and safe on LITHOLINE'S extra-clear, anti-halation support ...another of the many bonus features you can learn about from your Gevaert man.



Steep curve (D), shows unusual density after very short exposure (L)

GEVAERT

321 West 54th St.
New York 10, N. Y.

150 N. Wacker Drive
Chicago 6, Illinois

6370 Santa Monica Boulevard
Los Angeles 38, California

IN CANADA . . . Toronto 2B, Ontario

Gevaert man, George Hoeppner, (right) discusses the advantages of LITHOLINE ORTHO film with Horan Engraving's Jake Melkin, as he works with the film at a layout table.

FULL RANGE OF GRAPHIC ARTS FILM AND PAPER

PANCHROMATIC PLATES
Rapid Process Extra Panchro
P2(Pan), Clear and Matt

NON-PANCHROMATIC VARIETIES
Litholine Ortho Plates (Standard, .130 and .190 Glass)
Litholine Ortho Film 082 (.005" Safety Base)
Litholine Ortho Film 081 (.003" Safety Base)
Litholine Ortho Stripping Film "2" (.005" Safety Base)
Litholine Ortho "T" Paper (Translucent Base)
Process Extra Ortho Plates (Standard, .130 Glass)
Process Extra Ortho Film, (.007" Safety Base)
Normal Film (.007" Safety Base)

THIN BASE FILM FOR MASKING
Contrast "3" (Commercial Type Emulsion)
Dipos "3" (Dia-Positive Film) Contact and Rapid
Litholine Ortho "3"

PIGMENT PAPER FOR PHOTOGRAVURE AND SILK SCREEN
N=Normal V=Vigorous

60 years of research, development and service to the Graphic Arts!

L.A. Has Printing Sales Conf.

More than 150 persons attended the second annual printing sales conference sponsored by the Los Angeles, Calif. Printing Sales Club last month at the Mission Inn, Riverside, Calif. Sam Rose of Kellaway-Ide was elected president, succeeding Gordon Wiggins of the same firm. Bill Hansley, Ace Offset Co., was elected vice president; Dick Joyce, Mason-Springs Co., treasurer; and Ronald Davis, Stationers Corp., secretary.

Plaques in recognition of their contributions to the betterment of printing salesmen were presented to Eugene Baron of Pacific Press, and Dale Magor of Jeffries Bankote Co. Principal speaker was Robert J. Rodgers, vice president and sales manager of H. S. Crocker Co., San Francisco. Mr. Rodgers urged the group to "sell the customer's product—not yours."

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Miller Adds Salesmen

A. S. Wentworth has been named representative in the Chicago area and R. V. Hundley has been appointed representative in the St. Louis-Nashville territory for Miller Printing Machinery Co.

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C. R. Frederickson Dies

A retired vice president and treasurer of American Colortype Co., Clifton, N. J. lithographers, died June 26 in Coshocton, O. The deceased, Charles R. Frederickson, had retired from American Colortype three years ago and had headed American Art Works, calendar manufacturers, in the Ohio city until his death.

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St. Louis Lithographer Expands

Universal Printing Co., St. Louis, recently announced plans to build a one story modern office and printing plant covering 55,000 to 75,000 square feet.

Universal employs more than 200 hundred people in lithographing and printing. Plans also include the installation of new two and four-color offset presses according to Sam Langsdorf, Jr., president.

Chicago Craftsmen Elect

Officers of Chicago Club of Printing House Craftsmen for 1955-56 are (l. to r.): second vice president, Edward M. Egan, assistant sales manager, Twentieth Century Press, Inc.; first vice president, Lowell L. Dummer, co-owner, Bruce Offset Co.; president, Harold E. Banger, printing instructor, Marshall High School; treasurer, John A. Radziewicz, production manager, Service Printers, Inc.; financial secretary, Frank E. Swanberg, director of typography, Spiegel, Inc.; recording secretary, Gordon W. Wilson, technical engineer, Western Newspaper Union. The new officers were elected at the June 14 meeting of the Chicago Club.

Lithographers Win 35-Hr. Week

The Amalgamated Lithographers of America last month won a 35-hour work week for 240 workers in 11 Rhode Island litho plants, ALA announced. The contract calls for a seven-hour day and a five-day work week, time and a half for eighth and ninth hours of any work day and double time thereafter.

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Davidson Appoints New Dealers

Three new sales and service distributors for the Davidson Dual-Lith are: The Craftsmen Machinery Co., Boston, Mass.; The Duplico Co., St. Louis, Mo.; and Photo Offset Plate Service, Louisville, Ky.

The Dual-Lith is a product of Davidson Corp., subsidiary of Mergenthaler Linotype.

Miehle Adds Three to Sales

Miehle Printing Press and Manufacturing Company has announced three new additions to its New York sales force: William H. Hammett, Jr., Edgar E. Hartt and Bert S. Steiner.

Mr. Hammett will be responsible for Connecticut and the lower Hudson River valley. He formerly represented Miehle in the Cincinnati and Minneapolis territories.

Mr. Hartt will be responsible for Long Island including Brooklyn and Queens. He is a graduate of the School of Printing Management at Carnegie Institute of Technology.

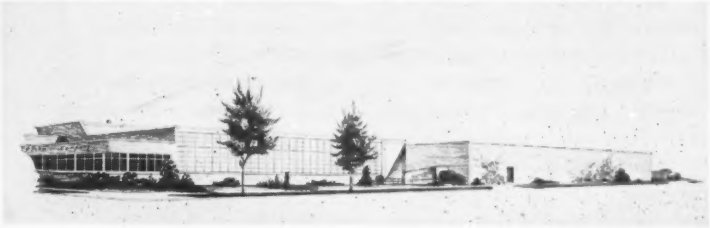
Mr. Steiner will be responsible for upstate New York including the Buffalo, Rochester and Syracuse regions. He joined Miehle 18 months ago.

Schmidt Bldg. Nearing Completion

Construction that has been going on since May on a $250,000 addition to the E. F. Schmidt Co., Milwaukee, is nearly complete. The new 16,400 square foot building will form the brick annex at the right in the drawing. The addition will house the company's offset lithographic press equipment, offset press platemaking facilities, and will provide storage for paper scheduled for offset production.

The window-less building will be illuminated by a general lighting system which will furnish 40 foot-candles or more at all working areas.

To prevent atmospheric conditions of the pressroom from being affected by movement of paper stock being brought in, air chambers have been installed at all entrances. The new addition will accommodate all the company's present offset equipment plus a new four-color offset press.



St. Louis Lithographer Modernizes

The Blackwell-Wielandy Co., St. Louis printers, lithographers and publishers of textbooks, recently bought the 120,000 square feet of floor space in which the company has been doing business since 1911. Blackwell - Wielandy plan extensive modernization of the building to update the company's operations, according to Clyde K. Murphy, president.

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Paper Prices "Apt to Rise"

Continuing firm to higher prices—on top of price increases announced so far this year in a number of lines, is the outlook for paper buyers, according to a front page story in the *Wall Street Journal*, June 6. Quoting an official of one big paper company, "Many mills have just wound up or are deep in labor negotiations for new contracts. Out of these talks are coming wage increases of four to five percent. Some of these higher costs have just recently been passed along to consumers in terms of higher prices and I'd say more are coming.

"Traditional shutdowns for two weeks in July in many paper mills are being limited to three and four days this year. No slackening in demand for paper and paperboard products is seen and the outlook is for an increasing strain on capacity."

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Minnich Elected Ad Club Director

Howard C. Minnich, in charge of public relations, advertising and sales promotion for the United States Printing and Lithograph Co., Cincinnati, O., was recently elected one of six new directors of the Advertisers Club of Cincinnati.

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Gibson In New Construction

Gibson Art Co., Cincinnati, has started construction of a new plant to cost more than $3 million, it was announced recently by president Roy G. Elliott. The new plant is located on a 114-acre site in suburban Amberley Village.

The first unit, with 150,000 square feet of floor space, to be completed this year, is a warehouse and shipping department. The printing plant is scheduled for construction this year.

Butler to VP of Sam'l. Bingham

Kenneth E. Butler has been appointed vice president and director of sales at Sam'l Bingham's Son Mfg.

K. E. Butler

Co., Chicago, it was announced last month. Mr. Butler was general sales manager and treasurer of Bingham Brothers Co., and had been with them 20 years. Prior to that he had been a salesman with Witaker Paper Co., Baltimore, Md.

Charles W. Greene has joined the company's research staff as a process and development engineer on rubber. Mr. Greene previously had been in the research and development department of Standard Products Co.

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Miller Appoints Rourke to NY

J. M. Rourke has been named Miller sales representative in the New York area by Miller Printing Machine Co., Pittsburgh. He is a native of Carlstadt, N. J.

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PIA Board Votes Dues Hike

Meeting at Colorado Springs, May 28-June 1, the board of directors of Printing Industry of America voted to raise dues for members-at-large and associations about 8.7 percent. The increase will take affect Nov. 1, according to William H. Walling, president of PIA. The board also approved the establishment of annual associate memberships by national companies supplying the industry.

In a prepared statement the board said: "Exhibits of machinery and other supplies will be permitted at the annual conventions of PIA in accordance with specifications to be developed in consultation with the national associate members." The ruling will apply following the next convention in Atlantic City, October 15-20.

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U. S. Buys McCandlish

Outright purchase of all capital stock of McCandlish Lithograph Corp., Philadelphia, by U. S. Printing and Lithograph Co., Cincinnati, was announced May 26 by W. H. Walters, president of U. S. and Atlee R. McCandlish, president of the Philadelphia firm. Purchase price was not disclosed. McCandlish will be operated as a subsidiary of U. S., with operations being continued at the McCandlish plant.

Harold A. Speckman, formerly vice president and sales manager of McCandlish, has been named president of the new subsidiary. Mr. Candlish will retire after more than 45 years in the business. No other personnel changes were announced.

McCandlish Lithograph Corp. has approximately 150 employes at its Philadelphia plant. The 45-year-old company produces multi-colored advertising material, including 24-sheet outdoor posters, point-of-sale displays, booklets, and folders, all printed by lithography. In addition to modern press equipment, the plant has complete plate making and finishing departments.

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Ten-Color Press for Cuba

Walter Soderstrom, executive secretary of NAPL, in his recent newsletter revealed that The Editorial Omega Lithograph Co., Havana, Cuba, is installing a ten-color offset press in their new plant addition. The press was recently displayed at Fred'k H. Levy Co., Philadelphia.

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Willnus To Intertype Presidency

Harry G. Willnus, president of Intertype Corp. since May 14, 1952 has become chief executive officer of the Company, succeeding to the post held by Neal Dow Becker, who died May 16. The office of chairman of the board was abolished.

Alden T. Mann, Jr., vice president, was elected executive vice president.

FRASER
SNOWLAND
BOND
The constantly increasing trend toward combination plants is building up production for Snowland Bond. The sheet, as suited to offset as to letterpress, is an asset to plants equipped for either or both printing processes. Versatile, strong, clean and sparkling in appearance, it enhances the job and builds repeat business. Packaged for protection in a moisture-resistant wrap. Backed by a long time quality raw material supply from 5,500 square miles of Fraser forests. Carried by leading merchants. Send for sample book.
RASER PAPER, Limited
SALES OFFICES NEW YORK, Chicago
MILL Madawaska, Maine

Textron Purchase Offer Turned Down by Brown & Bigelow

Directors of Brown & Bigelow unanimously rejected the offer for purchase of the company by Textron American Inc., at a meeting, June 9.

Simultaneously, Brown & Bigelow president Charles A. Ward announced a sharp upswing in the company's sales and profits, and directors voted to retire outstanding shares of preferred stock.

Negotiations between Textron and Brown & Bigelow have been under way for some time, with Textron offering to buy the assets of Brown & Bigelow with shares of $5 subordinated preferred stock and common stock of Textron.

Brown & Bigelow directors authorized Mr. Ward to notify company stockholders by letter that "after a most careful study by management and the board of directors it has been decided that the best interests of the common stockholders of Brown & Bigelow required that the offer be not accepted".

Estimated cost of retiring 18,401 outstanding shares of Brown & Bigelow 6 per cent cumulative preferred stock is $2,024,000.

A sales gain of 14 per cent and an earnings increase of 7¼ cents per share of common stock for May, compared to the same month last year, was reported by Mr. Ward. Sales to date this year are $28,922,000 compared with $28,691,000 for the same period last year.

Photo-Screening for Labels

Melvin Fuld, president of Fuld Bros., Baltimore, Md. told conventioneers at the Chemical Specialties Manufacturing Association conclave in Chicago recently that he is offering "Fuld's Cal", meaning "color affect lithography" to small distributors. He described the process, which is essentally silk screen work on metal and glass containers, as giving a "lithographic-like package" but there appeared to be little connection between the lithographic process and this production.

"Photo-screening is not a cure-all", he said, "and will not supplant paper label, metal lithography or ceramic firing because in long runs, screen reproduction costs more than regular lithography on metal or applied color lettering on glass".

Fuld's Cal is being offered to small distributors of household chemicals, whose volume does not justify metal decorating or ceramic firing of glass containers.

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Baker Defeated in Coast ITU Vote

In what was considered a major upset, Claude Baker, president of San Francisco's Typographical Union No. 21 since 1945 and prior to that, president of the International Union, was defeated by more than 200 votes in his bid for re-election last month. Joseph D. Baird, formerly of the San Francisco News Chapel and now at Halle-Cordis, trade typesetting firm, was the winner. The count was 714 votes for Baird, 503 for Baker.

As Mr. Baird was listed at the top of the Progressive ticket, the result was considered a defeat for the Independent party in which Mr. Baker has long been an active leader. Despite Claude Baker's defeat, Clarence W. Abbott, first vice-president and a Baker supporter, was re-elected, and 472 votes against 400 for R. J. McDonald and 335 for Russell A. Wagle. Mr. Bard took office June 19th for a two-year term.

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Payne Corp. to Sell Lawson Line

Ernest Payne, president of Ernest Payne Corp., New York, announced last month that the company has been appointed an authorized selling agent for the Lawson line of paper cutting equipment. Included are the Lawson 39″ Automatic Clamp Cutter; the 46″, 52″ and 55″ hydraulic clamp cutters; the electronic spacing cutter; the multiple head drilling machine; and the Regent line of hydraulic clamp cutters in 30½″ and 41″ sizes.

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New Plant for Chicago Binder

General Binding Corp., Chicago, recently purchased a 19-acre tract of land in Northbrook, Ill.., in the Chicago suburban area. The company plans to construct a new plant there in about a year, W. N. Lane, president, announced.

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Chicago Craftsmen Elect Officers

Harold E. Sanger, printing instructor, Chicago, has been elected president of the Chicago Club of Printing House Craftsmen succeeding Steve Sluka of Vogue Wright Studios. Lowell L. Dummer, co-owner of Bruce Offset Co., is the new first vice-president, and Edward M. Egan, assistant sales manager of the Twentieth Century Press, Inc., was named second vice-president. John A. Radziewicz, production manager of Service Printers, Inc., is treasurer and Frank E. Swanberg, director of typography for Spiegel, Inc., was named financial secretary. Gordon W. Wilson, technical engineer for Western Newspaper Union is recording secretary.

The officers were inducted at the annual election meeting of the Club, June 14, by Thomas P. Mahoney, vice-president of the Regensteiner Corp., and president of the International Association of Printing House Craftsmen.

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Wolf, Chairman of Magazine Clinic

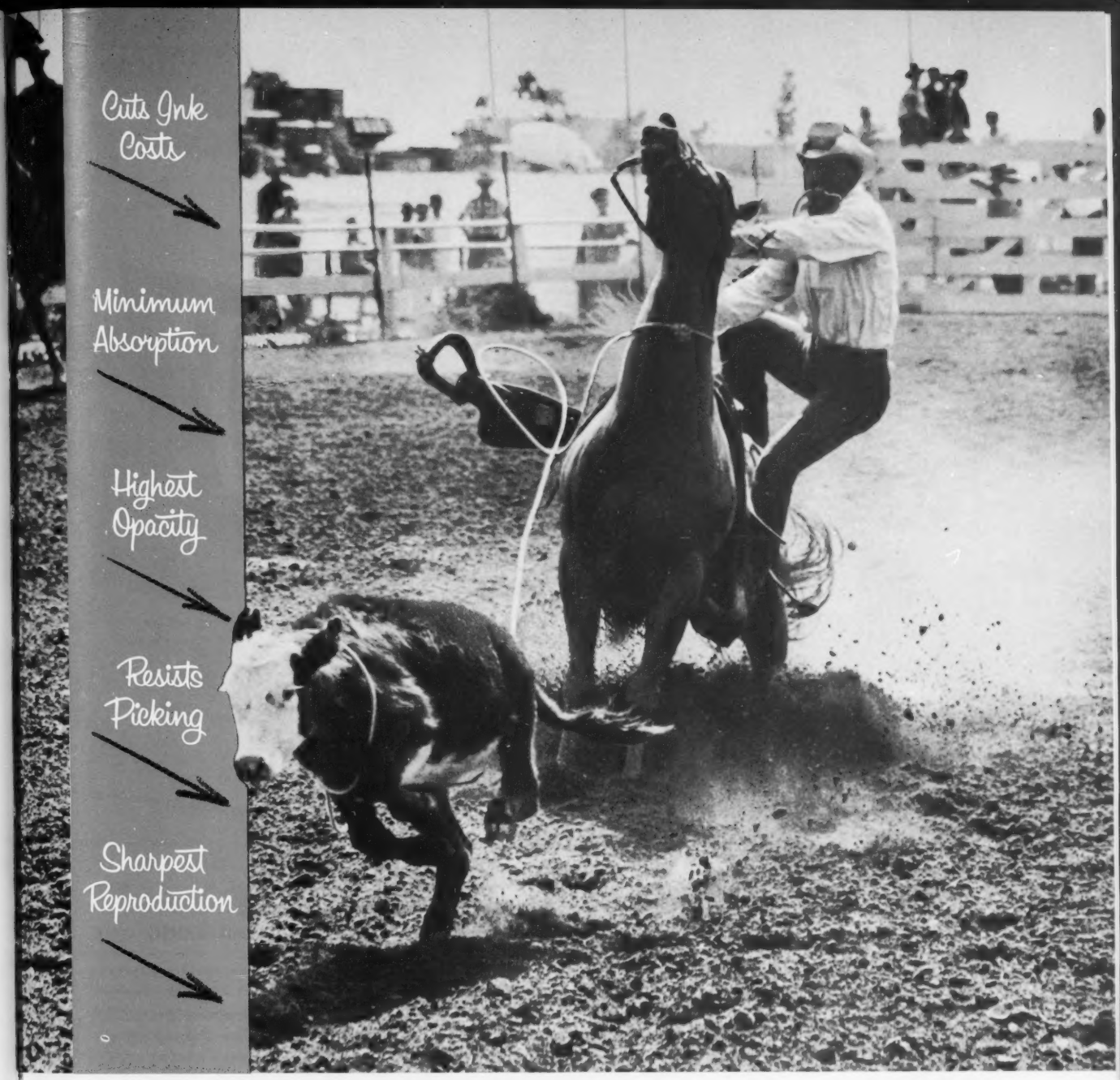
The Magazine Clinic of the American Institute of Graphic Arts recently completed a successful season under the chairmanship of David Saltman and has named Henry Wolf, art director of *Esquire*, as chairman for 1955-56. Mrs. Lucile D. Kirk, *Parent's Magazine*, will be vice-chairman again next year.

•

Phila. Offset-Letterpress Merger

T. A. Winchell & Co., Inc., letterpress printers and publishers, The Winchell Co., offset printers, and the John T. Palmer Co., printers, all of Philadelphia, recently announced plans to merge.

F. H. Gloeckner heads the Winchell companies and James A. Crawford manages the Palmer firm. All production facilities will be operated in the Winchell plants at 1315 Cherry Street, Philadelphia, when the merger is completed in August.



SECURE YOUR PROFITS on jobs requiring coated paper

Now you can put a new kind of coated offset paper on your press that will give you many important profit-making advantages. It's paper coated with Glidden Alpha Protein.

This new coating material makes possible faster press runs, lower ink consumption and at the same time, cleaner, sharper reproduction. In addition, paper coated with Alpha Protein has greater smoothness, stronger resistance to picking, high opacity and more brilliance.

If your supplier does not stock paper processed with Glidden Alpha Protein, please mail the attached coupon for complete information.

Glidden ALPHA PROTEIN PROCESSED PAPERS Glidden QUALITY PRODUCTS

THE GLIDDEN COMPANY

Chemurgy Division

1825 N. Laramie Street
Chicago 39, Illinois

This advertisement is lithographed on paper processed with Glidden Alpha Protein. It is typical of the superior reproduction that can be obtained.

YES...

I am interested in more information about Glidden Alpha Protein; and I would like the names of suppliers in my area.

Name _____

Address _____

City _____

State _____

Title _____

OXY-DRY THEORY

is to *electronically bond* micron sized (graded as to size) particles of starch powder to a printed sheet just before it reaches the delivery rack. Each particle holds the printed surface away from the back of the next sheet so as to prevent ink offset, permit drying of ink, and provide "plumb-bob" jogging of sheets.

OXY-DRY OPERATION

provides the *controllable* mechanical method of depositing the minimum amount of the correct powder formula required on the sheet in such a way as to eliminate excess spreading of powder on press equipment and irregular spreading on the sheet. In addition, OXY-DRY removes the static-electricity from sheets so that they jog and handle perfectly without sticking in subsequent production of printing and processing.

OXY-DRY PRECISION ENGINEERING

represents the ultimate in the only *exact* machinery that can carry out the theory and operation of perfect ink offset prevention. From installation through operation every OXY-DRY Sprayer screw, bolt and part is *precision engineered* to do a *precision* job on almost every known printing press in existence. To those printers who want to increase the *salable* number of impressions per hour of production time for their entire plant *(paper, board or film)* this means we can cost estimate and install the only *right* ink offset prevention process . . . from parts and assemblies specifically *precision engineered* to do a *precision* job on each press . . . equipment that will run longer and better.

The press name, model number and maximum sheet size sent to us will start you on your way to getting the tremendous competitive advantage of OXY-DRY, the only right ink offset prevention process. Or, our new catalog contains more complete information that will help you decide.

THE ONLY *RIGHT* INK OFFSET PREVENTION PROCESS

OXY-DRY

OXY-DRY SPRAYER CORPORATION

NEW YORK • CHICAGO • SAN FRANCISCO

320 S. Marshfield Avenue, Dept. ML Chicago 12, Illinois

NEW SUBSCRIPTION ORDER

MODERN LITHOGRAPHY

☐ 2 YEARS FOR $5* OR ☐ 1 YEAR FOR $3*

Company _____

Name _____

Address _____

City _____

Postal Zone State

Subscription Address _____
(If different from above)

*Above rates are for U. S. and U. S. possessions ONLY.

CANADA: $4 ☐ 1 year; $7 ☐ 2 years (payable in Canadian or U. S. funds)
LATIN AMERICA $4 ☐ 1 year $7 ☐ 2 years
OTHER COUNTRIES: $9 ☐ 1 year $15 ☐ 2 years

Please check only ONE main classification below

☐ 1. Offset and direct lithographing plants.
- ☐ Subscription in company name
- ☐ Owners and managing officers
- ☐ Superintendents, foremen, etc.
- ☐ Other Lithographic employees

☐ 2. Letterpress printing plants and employees.

☐ 3. Manufacturers, jobbers or dealers of lithographic equipment and supplies, and employees.

☐ 4. Libraries, colleges, schools and trade associations.

☐ 5. Miscellaneous — including:
- ☐ Photo-engravers and Offset Plate Makers not included above.
- ☐ Artists and consultants
- ☐ Advertising managers and buyers of printing not included above.

☐ Others .....

.....

FIRST CLASS
PERMIT NO. 80
(Sec. 34.9, P. L. & R.)
CALDWELL, N. J.

BUSINESS REPLY CARD
No Postage Stamp Necessary if Mailed in the United States

3c - POSTAGE WILL BE PAID BY —

MODERN LITHOGRAPHY

P. O. BOX 31

CALDWELL, N. J.

FIRST CLASS
PERMIT NO. 80
(Sec. 34.9, P. L. & R.)
CALDWELL, N. J.

BUSINESS REPLY CARD
No Postage Stamp Necessary if Mailed in the United States

3c - POSTAGE WILL BE PAID BY —

MODERN LITHOGRAPHY

P. O. BOX 31

CALDWELL, N. J.

NOTICE TO PUBLISHER OF CHANGE OF ADDRESS

Please change the address for my copies of
MODERN LITHOGRAPHY

FROM _____
(Street Number, Apt. Number, P. O. Box Number or RFD Number)

_____
(City) (Zone Number) (State)

_____
(Show any numbers or dates included in address or copies for identification)

TO _____
(New Address—Street and No., Apt. No., P. O. Box No., or RFD Number)

_____
(City) (Zone Number) (State)

NAME _____ Date _____
(As it appears on your magazine)

4-55

Lithographers Incorporate

Litho-House, Inc., printing and publishing, New York City has been granted charter of incorporation listing capital stock of 200 shares, no par value. Directors: Philip Flamm and Hilda Flamm, Bronx, N. Y. and Ira Gollobin, New York City.

Lithography By Dart, Inc., lithograph-publisher-printer, New York City, has been granted charter of incorporation listing capital stock of 200 shares, no par value. Directors: Jay F. Gordon, Rose Hanish and Charlotte Goldberg, New York.

Color Litho, Inc., Cleveland, O., has been granted charter of incorporation listing capital stock of 250 shares, no par value; J. S. Herman, Cleveland.

•

Litho Man Dies on West Coast

Raymond J. Burns, founder of Ray Burns Lithographers Inc., Los Angeles, died May 28 at Desert Hospital, Palm Springs after a long illness. He was 60.

•

Fitchburg Names West Coast VP

Maurice A. Park is now vice president in charge of west coast operations of Fitchburg Paper Co., Fitchburg, Mass., it was announced last month by Carl M. Fellows, executive vice president. Making his headquarters in Los Angeles, Mr. Park assumed his new duties June 20.

•

Vacation Closings:

Intertype Corp., New York, will observe a plant and office-wide vacation period, July 30 to Aug. 14. Regular shipments will not be made but arrangements have been effected to take care of any emergencies.

J. F. Tapley Co., New York, will be closed July 2-17, inclusive. The office and receiving department will be open, however.

•

Stickler Named ASA Executive

Lawrence R. Stickler of R. R. Donnelley & Sons, Chicago, has been elected vice president of the Chicago chapter of American Statistical Association.

(l. to r.) Frank Morrison, president, National Association of Printing Ink Makers; Dr. John C. Warner, president, Carnegie Institute of Technology and president-elect, American Chemical Society; Albert E. Gessler, emeritus research director, Interchemical Corp.; and G. Stuart Braznell, president, National Printing Ink Research Institute.

Gessler Receives Ault Award

Ink makers and suppliers from the U. S. and Canada, at their 41st annual convention, Skytop, Pa., May 25-27, paid tribute to a man who helped make possible today's fast printing schedules. Dr. Albert E. Gessler, emeritus research director, Interchemical Corp., New York, was presented with the Ault Award for distinguished contribution to the advancement of the printing ink industry. He developed heat-set inks, first employed in letterpress printing and more recently adapted to long-run offset work.

The Ault Award was established in 1954 by Broumwell Ault, vice-president, Interchemical Corp., to honor his uncle, L. A. Ault, a pioneer ink maker and co-founder of Ault & Wiborg Co., a predecessor firm of Interchemical. The annual winner of the award is selected by a committee from nominations in the printing ink, graphic arts, and the chemical fields. Carl R. Schmidt, president, Lithographers National Association; J. L. Landenberger, president, Lithographic Technical Foundation; and William H. Walling, president, Printing Industry of America, were among the judges.

Born in Metzingen Wurtemberg, Germany, May 8, 1885, Dr. Gessler finished the equivalent of college training in the U. S. at the age of 20. At 22 he had earned his PhD. He came to the U. S. six years before World War I to do research in dyestuffs and pigments. Early in the 1930's, Dr. Gessler discovered a composition, which, when run on a printing press with auxiliary heating equipment, came close to meeting requirements for an odorless and quick-drying ink.

When Life magazine was ready for publication in 1936, "Vaporin", the only ink which would permit the speedy printing schedule demanded, was perfected.

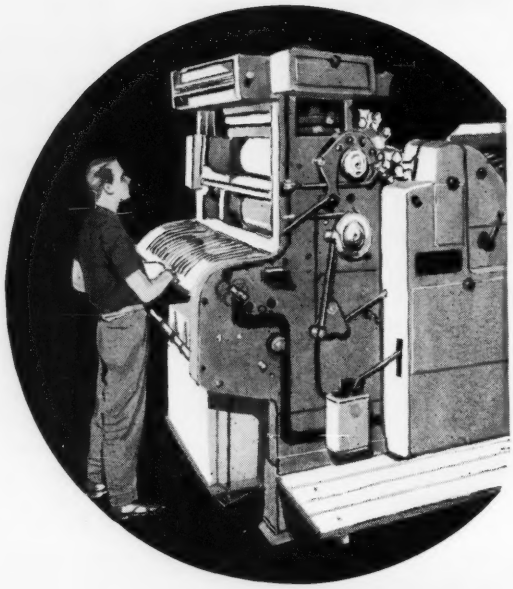
From 1937 to 1952, Dr. Gessler was granted 22 patents, many of them innovations to speed up printing operations of all processes.

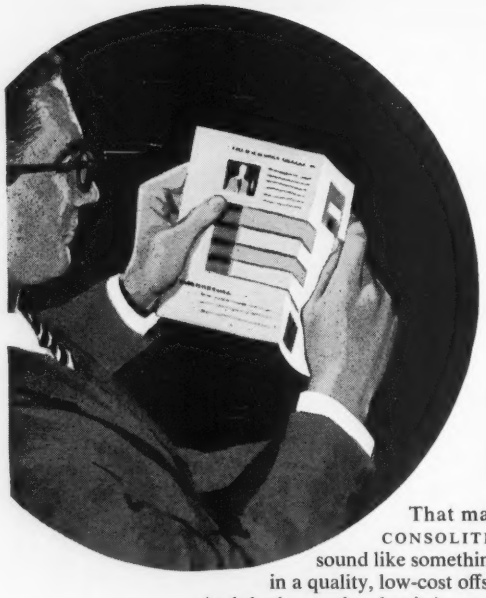
Frank Morrison, Morrison Printing Ink Co., Cleveland, was re-elected president of the National Association of Printing Ink Makers at the annual meeting. Other officers re-elected were: Fred Weymouth, vice president, Interchemical Corp., Printing Ink division, New York, as vice president; and J. S. Hart, J. M. Huber Corp., Hillside, N. J., as treasurer. Herbert B. Livesey continues as secretary.

A 20 minute motion picture in color, "Printing Ink Goes to College", was shown to more than 200 ink makers and suppliers present. The film details the many applications of printing ink in the graphic arts, describes how it is made, and presents the story of the National Printing Ink Research Institute at Lehigh University, where a cooperative research project on printing ink has been conducted for the past 10 years.

On the estimate...

On the press...





On the customer's desk...

new **CONSOLITH GLOSS** makes the best impressions!

That makes new CONSOLITH GLOSS sound like something special in a quality, low-cost offset paper. And that's exactly what it *is*.

New CONSOLITH GLOSS *actually costs only slightly more than ordinary uncoated offset sheets.* Yet its fully mineral-coated and highly finished surface easily matches more expensive papers for excellence of printability and performance.

It has unusual strength and bulk, making it ideal for folders, catalogs, inserts and similar quality work. Its high dimensional stability and exceptional ink receptivity have established an enviable record for smooth, trouble-free performance. And like *all* Consolidated Papers, new CONSOLITH GLOSS is pre-tested on the press to insure consistently fine quality results.

To *prove* every word, your Consolidated merchant will be glad to furnish free trial sheets. He's the *only* one who has new CONSOLITH GLOSS. And a test run is the only way to actually see for yourself how this remarkable new offset value can make the *best* impressions for you.

Consolidated enamel printing papers

production gloss • modern gloss • flash gloss
productolith • consolith gloss • consolith opaque

CONSOLIDATED WATER POWER & PAPER CO. • Sales Offices: 135 S. La Salle St., Chicago 3, Ill.

Moeller Names Sales Manager

Elvin Brockman, Jr., has been appointed sales manager and administrative assistant of Moeller Printing Co., Cincinnati. Mr. Brockman has been associated with lithography for seven years. Robert T. Moeller in announcing the appointment said that the company, operating four offset presses with complete camera and plate making equipment, is celebrating its third year as a corporate structure.

•

Color Corp. Opens N. Y. Office

Joseph Snyder, president, Color Corporation of America, announced recently the opening of New York offices and salesrooms at 270 Park Avenue. Now associated with Mr. Snyder are: Irving J. Newman, formerly a partner of Newman-Schmidt Studios, Pittsburgh; Robert Brown, formerly with William M. Harris Associates; Jack Meyers, formerly with Alco Printing and Lithograph Co.; and Miss Audrey Bevan, formerly with Capital Airlines.

With this move, Color Corporation is supplementing its Tampa, Fla., operation which has provided Eastman dye transfer prints, duplicate and large display transparencies by Ansco and Eastman processes, and inexpensive quantity color prints, for eight years. Mr. Snyder also announced that his company is negotiating for franchises in several of the new amateur color processes in preparation for the expansion of his laboratories into the amateur finishing field.

•

Walling on Publishers Board

William H. Walling, chairman of the board of Rogers-Kellog-Stillson, Inc., New York, has been elected to the board of directors of Rinehart & Co., New York publishers, it was announced recently by Stanley M. Rinehart, Jr., president.

Mr. Walling is past president of the New York Employing Printers Association, and last year was elected president of Printing Industry of America. He entered the printing and lithographing industry after World War I and is now in his 36th year with the same group of companies.

Stern Foreman Gets 35 Yr. Award

Ralph D. Littlefield, foreman of the lithographic press department of Edward Stern and Co., Inc., Philadelphia, received his thirty-five year service award from president Maurice Segal last month. The new 76-inch, four color Miehle press just installed at Edward Stern is in the background.

•

New Cards Smoke, Wiggle, Talk

Novo Card Publishers, Inc., Chicago, placed on the market recently a new card that smokes. Others shown previously that fly, pop, wiggle, grow and talk are examples of the unique production of the nine-year old company.

William Harris, owner, entered the greeting card industry in 1946 and concentrated on design and production of humorous novelty cards. All business was done at the start by mail (no telephone!) and the first year's gross was $12,000. Last year gross sales were $325,000 and half a million dollars in sales is the goal for 1955.

All cards are printed by offset on a Harris 52-inch two color press. Camera and plate work is done outside, Mr. Harris said.

•

Brown Resigns at Institute

Albert N. Brown, general manager of the Chicago Lithographic Institute for the past three years, resigned his post effective June 30. Mr. Brown joined the school's staff seven years ago, coming from Ray School of Photography, to take charge of camera classes at Glessner House. Following resignation of William Morgan, he was advanced to general manager. The Institute's affairs will be managed by a committee of Board members until a successor to Mr. Brown is named.

•

Chicago Institute Graduates 180

Harry Spohnholz, vice president of Local 4, ALA, addressed 180 graduates of Chicago Lithographic Institute's 1955 class, June 1, advising that this would probably be the last senior class to leave the school from this location. The Institute expects to be settled in its new quarters in Local 4's new home on Chicago's west side by this time next year. Mr. Spohnholz, vice president of the Institute's Board of Directors was "pinch-hitting" for James S. Armitage, Inland Press, and president of the Board, who was confined to a hospital. Other speakers at the commencement ceremonies included: Albert N. Brown, general manager; Ernest G. Karge, Steelograph Inc., treasurer; and George Gunderson, secretary.

George A. Mattson, executive director of the Chicago Lithographers Association was the commencement speaker who discussed employer-employee relations in the lithographic industry.

•

R. H. Decker Dies

Randall H. Decker, founder and president of Marquardt & Co., Inc., New York paper merchants, died May 23 at his home in Upper Montclair, N. J. after a short illness. He was 66. Mr. Decker was also vice president of the New York Paper Trade Association.

•

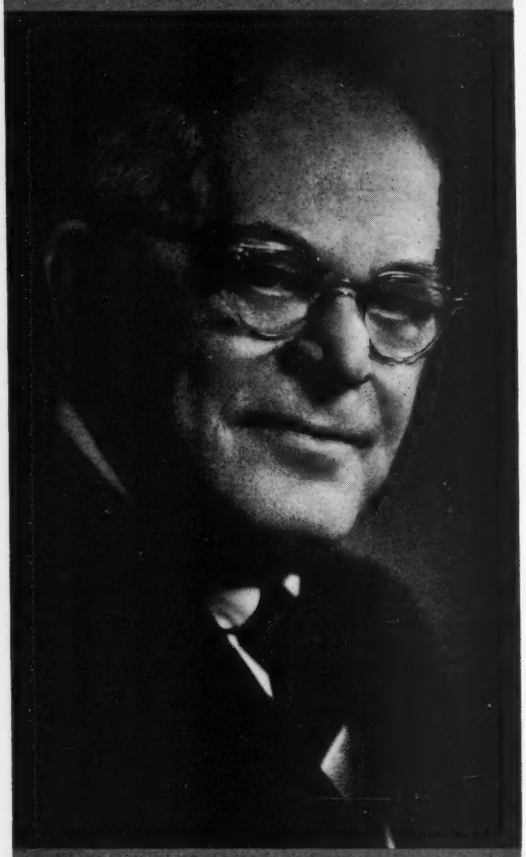
Greater Growth for Todd Seen

John C. Coleman, president of Burroughs Corp., Detroit, spoke to members of the Todd Pioneers, (quarter-century club) in Rochester, N. Y. last month. Burroughs and Todd recently completed plans for affiliation.

Sighting a "greater growth in the machine and lithography departments" at Todd, Coleman described a new automation device which he believed to be revolutionary in the banking field both here and abroad.

TO HONOR AND COMFORT OUR FRIEND

Lex Claybourn



When a strong and rugged fellow suddenly becomes incapacitated, he is very likely to feel that his friends have deserted him—even though this is not true. None of us wants Lex to feel that way, and our main purpose in establishing a Claybourn Fund is to let him know that thousands of his friends all over the world are thinking of him, praying for him and assuring him through our concentrated thoughts that we're in his corner and plugging for him to win this fight.

The amount you may be able to donate to the Claybourn Fund is not of vital importance —we would like to build it as high as possible —but the principal idea behind this movement is to GIVE OF OURSELVES in transmitting to Lex OUR SINCERE LOVE to a GREAT GUY, who through the years has been a benefactor to the Graphic Arts Industry, and deserves to be honored as such.

Checks should be drawn to the Claybourn Fund—W. S. Reed, Chairman and sent to Bud Reed, c/o Dexter Folder Co., 330 W. 42nd St., New York 36, N. Y.

Coloron Kit for Predicting Color Combinations

Reviewed by Herbert P. Paschel

COLORON is a tool for the graphic arts designed to predetermine the results to be expected when combining various tints of color, overprinting type on a colored background, printing type in reverse, color matching, etc. The intention is to provide a visual example for what otherwise would be sheer guesswork. Coloron is a kit of 11 tone scales (screen tints) each printed in a different color on a separate transparent plastic support. The tints range from a solid to a 10 per cent tone in 10 per cent increments. Each tint bar contains a line of type in solid and reverse within the tint field. At each end is a block of solid tone, within which, in reverse, is type in the same halftone value as the tint. In the clear area alongside each step is another line of type which not only identifies the tint value of each step but, being in the same halftone value as the adjacent tint, provides an indication of the appearance of type when screened.

The eleven colors are the three process hues (yellow, cyan and magenta); the seven basic colors (purple, brown, red, orange, yellow, green and blue) and black. An additional sheet contains lines of type, in black ink, ranging from 6 to 14 point. By the various reproduction conditions simulated on the Coloron sheets, plus the appropriate manipulation of the sheets, it is claimed that exact reproduction results can be anticipated.

There can be no question that the use of the Coloron system will take the guesswork out of many problems connected with color reproduction. In the hands of students and the less experienced, Coloron will certainly help toward a better understanding of color problems, color mixture, overprinting, use of type in reverse, etc. Even the experienced may find the kit helpful in preventing gross errors in interpretation and judgment. But a definite danger exists in expecting too much of the system or complete reliance on its accuracy.

There are any number of definite physical limitations which cannot be overcome. For example, two Coloron sheets superimposed can never exactly duplicate the conditions of two similar ink films applied to a paper surface by a printing process. In the former case the two ink films are separated by a thickness of plastic whereas on paper the two ink layers would be one on top of the other in intimate contact. This separation alone makes for considerable difference in visual appearance.

A second factor concerns the difference in the ink film on paper as against plastic. Placing an image of fixed characteristics (such as the Coloron image) against a sheet of paper is no true indication of the result obtained when the ink is applied directly to the paper through the usual processes. The same ink film applied to different paper surfaces will not appear the same. Then too, the Coloron images are obtained from relief plates and, as is well known, lithographic images, especially halftones, differ considerably from letterpress images. The screen used in preparing the Coloron masters is a 110 line ruling. It does not follow that results obtained with other rulings will be the same as the observed results with Coloron.

Such criticism based on physical conditions is not intended to prejudice the reader against the Coloron device. It can prove very useful if not misunderstood or misused. It should prove to be an excellent teaching aid and, in the hands of the novice, will materially aid in the shaping of a better craftsman. It is hoped that the graphic arts will make use of Coloron, for only with extended use and intelligent analysis can we expect the improvement and ultimate perfection of good ideas, of which Coloron is one.

COLORON KIT (C-1), $9.50 (with case) Delta Brush Mfg. Corp., New York.

Champion Wins Ad Awards

The Art Directors Club of Detroit presented Miss Elsa Wehr, assistant advertising manager, Champion Paper & Fiber Co., with the gold medal award for first place honors in the seventh annual awards contest last month. Winning advertisement was Champion's insert picturing a group of files laid out in an intriguing design, and printed in four color on Kromekote stock (see ML, April, p. 59-60). This same insert also copped the Award of Distinctive Merit in the 34th annual exhibition of the Art Directors Club of New York. A direct mail brochure also brought honorable mention for Champion in the Detroit contest.

•

Ruggles: No. 1 Rotarian

Harry M. Ruggles, retired head of H. L. Ruggles & Co., Chicago combination shop, and fifth man to join Rotary after its organization in Chicago 50 years ago, now bears the title "No. 1 Rotarian". The other four who joined before him are dead. During Rotary International's Golden Jubilee convention in Chicago last month he was called on to lead the crowd in singing at sessions in the Chicago Stadium. Mr. Ruggles, 83, retired from his business several years ago and his son Kenneth manages the firm as executive vice president.

•

Canadian Lithographer Dies

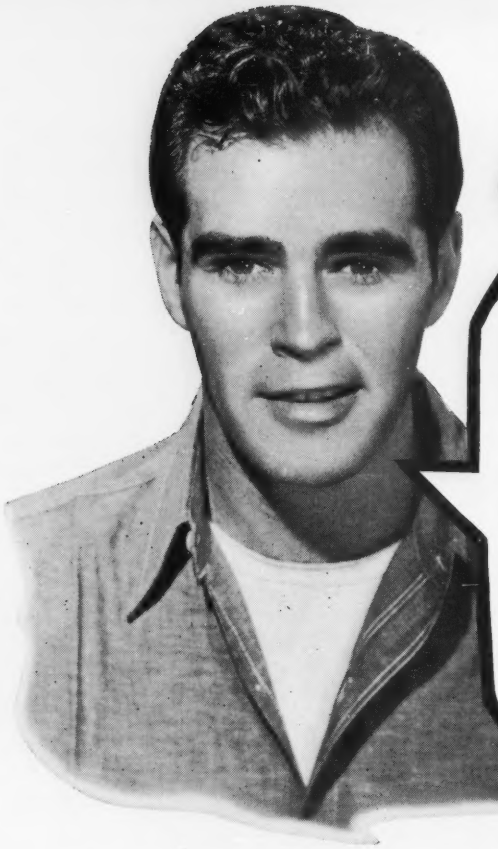
Clinton E. Wigle, vice president of Howell Lithographic Company Ltd., Hamilton, Ontario, died May 22. He was 58. Mr. Wigle had been a resident of Hamilton for 33 years and devoted much of his time to the annual fund raising activities of the Community Chest.

•

Educators Visit Consolidated

Consolidated Lithographing Corp., Long Island, N. Y., cooperated with the Long Island Association in its annual project of Business-Industry-Education Day by showing their plant to a group of educators representing the schools in the area, last month. Several of the officers and executives of the company guided the visitors on the plant tour.

Trojan 3D GUMMED PAPER



I DIDN'T KNOW A GUMMED PRINTING PAPER COULD BE SO DIFFERENT

It is hard to believe that so much better reproduction could be had with a gummed printing paper. Trojan Gummed Printing Paper with 3D Processing not only improves the printing qualities but makes the stock handle, feed, deliver and jog better.

Your opinion about this gummed paper is more important than ours, so instead of just reading about it, why not see how it performs yourself. Let us send you some sample sheets, or better yet, order a trial quantity and make your own tests. Write today.

A
Complete Line of
Gummed Printing Papers
in Sheets and Rolls

LABEL PAPERS
STAMP PAPERS
LAMINATED FOILS
LAMINATED PAPERS
LAMINATED FABRICS
HEAT SEAL PAPERS
HEAT SEAL FOILS

The GUMMED PRODUCTS Company

. . . Specialists in the gumming of printing papers and sealing tapes

Main Offices and Mills: **TROY, OHIO** — *Sales Offices: Atlanta, Chicago, Cincinnati, Cleveland, Los Angeles, New York, Philadelphia, St. Louis, San Francisco — Distributors from coast to coast.*

Litho Club NEWS

St. Louis

Maintenance Pointers from Tyler

Al Boes, president of the St. Louis Litho Club and foreman of Mendle Printing Co., offset department, introduced head-table guests June 2nd at the club's regular meeting. They included: Carl Gerak, Cavanagh Prtg. Co., treasurer of the Club; Walter Blattenberger, southwest division of Western Printing & Litho Co.; Ted Markle, Harris-Seybold Co.; Roy Tyler, Installation and Service manager, Harris-Seybold Co., Cleveland, guest speaker; and Harold Rohne, Letterhead & Check Corp.

More than 45 members heard Mr. Tyler discuss "Preventive Maintenance". He pointed out that rollers should be taken off and cleaned every two weeks—and washed, because, in his opinion, no mechanical wash up device could completely clean a roller or remove more than 50 per cent of the grease. He read a letter from Cutler-Hammer, electrical manufacturers of Milwaukee, who reported instances such as one in Cleveland wherein the original contacts were permitted to wear until they froze.

Dick Scully, Continental Litho Co., said that the part of Mr. Tyler's talk dealing with cleanliness of the press was very important and that the pressman should consider that his job. Tyler closed by quoting the initials of a slogan Harris-Seybold use in their training schools—TNFG, which means *T*ake *N*othing *F*or *G*ranted. "If you take it for granted that lubrication is getting to that part without checking, you are not getting preventive maintenance."

The Club will visit the Southwest division of the Western Printing & Litho Co., in September. In October, Public Printer Raymond Blattenberger will be the guest speaker.

Canton

Club Sees Hammermill Paper Co.

Canton Litho Club held their May meeting in the form of a tour through the Hammermill Paper Co., Erie, Pa. A total of 72 members took the bus or drove for the day's outing. After dinner at the company cafeteria, they were shown through the mill, in groups of seven or eight. After the tour a cocktail party and dinner at the Moose Club in downtown Erie completed the day.

There will be no meetings held during the summer months. On the second Wednesday of each month, at the Linway Restaurant, fall and winter meetings will convene.

Cincinnati

Annual Picnic Set for August

Ben Smith of the Hennegan Co. is head of the picnic committee for the annual family outing of the Cincin-

Twin City

New Horizons — in Three Colors

Twin City Litho Club members, at their June meeting, heard Joseph Jiloty, Eastman Kodak Co., discuss the growing market for three color process work. Mr. Jiloty noted that inks were the big problem in the beginning of the development but suitable inks were now on the market. Coated paper was recommended for best results with the three-color process work.

Special guest of the evening was Tjiam Som Hoei from Indonesia, who is in the U. S. observing methods of and getting information on the graphic arts. Mr. Hoei has been at Lund Press, Minneapolis, for the past two weeks and will include in future trips, Nashville, Milwaukee, Chicago, New York; then back to the Twin Cities to study methods at Brown & Bigelow, St. Paul.

Tjiam Som Hoei (l.), guest from Indonesia, learns about American methods from Herb Maki, Lund Press, Minneapolis.
Joseph Jiloty, Eastman Kodak Co., was Twin City's speaker.

After dinner "small talk" is made by (l. to r.) J. Musson, Colwell Press, Minneapolis; Ira Hoffman, Eastman Kodak Co.; and G. Ross, Colwell Press.

nati Litho Club, Aug. 6 at Lahmann's Grove in suburban Dent, O. Games, sports and prizes for both youngsters and oldsters with refreshments included are being offered for a cost of $3 per family.

More than 100 members, wives and guests took the annual moonlight boatride on the Ohio River, June 4. Balmy weather allowed many to sit on the open upper deck while others danced or played cards. Roast beef dinner was served early in the evening, and snacks were provided later.

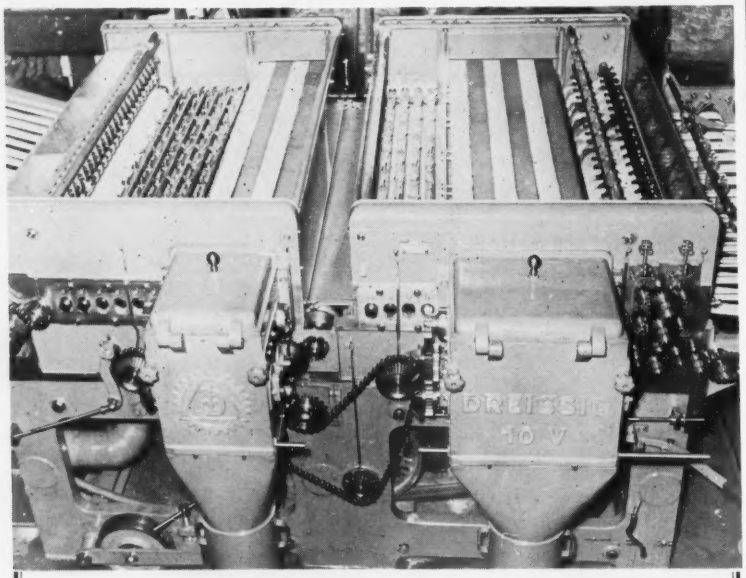
Milwaukee

Double Feature Film Nite

Milwaukee Litho Club's June meeting (last until September) was "an evening at the cinema" with "Bradshaw's Billions," new Kodak film and "With This Ring," telling the story of Miller Brewing Co., the feature attractions.

Eastman's Kodak's film in sound and full color is "the happy story of a happy genius," following the rise to fame and fortune of George Bradshaw, inventor of such products as "George Fortaset," and "George-O, The Drink With a Wink." George's imaginative printer is right there all the time guiding him. Serious purpose of the film is shown in the step-by-step indoctrination George gets on the printing processes available to him for advertising his products.

Miller Brewing Co., Milwaukee, is celebrating 100 years anniversary in America and produced its 40 minute film in full color and sound. The movie starts with Frederick Miller learning the art of brewing while serving as brewmaster at Hohenzollern Castle, Germany, in the first half of the nineteenth century.



The Heavy Duty Flat Bronzing and Dusting Machine

DREISSIG KOMBI 10 V

- The KOMBI 10 V combines one Bronzing Machine and one Dusting Machine on a common base. This combined machine is thus extremely space-saving, particularly for those large scale printing shops where the work is continuously going on in several shifts and where, according to experiences, two bronzers used to be connected, one behind the other, to obtain higher production rates.
- In the KOMBI 10 V type construction a space provided between the two machines prevents the bronze powder in suspension in the Bronzer from being carried over to the Dusting Machine. Ten burnishers, ten dusting bands and four dusting-off rollers account for intensive burnishing and really dependable front and back dusting. A special bronze application device, system "Muller," for which patents are pending, saves about 30 to 40 percent of bronze powder, eliminates all danger of transfer of printed parts to other sheets, and avoids whirling up of dust.
- The operator may lower or raise all burnishers evenly and at one time. The Dreissig Bronzer can take a sheet size of 76".

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Houston

Review SW Clinic Highlights

The July 5 meeting of Houston Litho Club will be held at Santa Anita Restaurant. Following the dinner "Bradshaw's Billions," a new Eastman release, will be shown. Allen Black of Sharp Camera Co. has arranged for this film. Elwood Sayers, Club president, will give highlights on the Southwestern Litho Clinic and Bill McDermott will report on the Milwaukee convention of the National Association of Litho Clubs.

New York

Club Plans September Picnic

New York Litho Club will converge on Plattdeutsche, Grove, Franklin Square, Long Island, Sept. 17, for its annual picnic. Art Tarling, committee chairman, said that a German dinner will be featured with sauerbraten and trimmings.

Printers Converge on London

International Printing Machinery and Allied Trades Exhibition, the tenth to be held in Britain, will probably break all records for attendance according to officials. More than 330 exhibitors will show their wares.

Open from July 5-16, the show (IPEX for short) will feature products and equipment from 40 different countries. The last IPEX took place in 1936 and set a single-day attendance mark of 59,000.

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Equipment

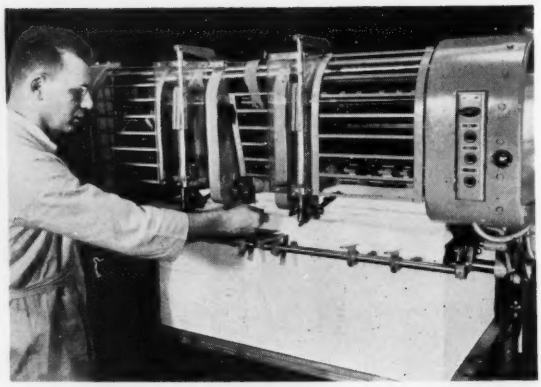
SUPPLIES, BULLETINS

Color Accessories for Cameras

Robertson Photo Mechanix, Inc., Chicago, has introduced a full line of accessories including process color equipment, for their new 16 x 20" darkroom camera. The camera can be purchased as a black and white camera and adapted to color at a later date; thus, as a firm's work expands into process colors, their "320" camera will expand with it the company said.

Included in the accessory equipment is a precision positive holder for holding positives and transparencies in register; a precision plate holder, consisting of plate bars to hold photographic glass plates in corresponding register; a transparency opening in the copyboard to allow back lighting of the transparencies; a manual flash lamp for flashing an exposure through the lens; and a glass screen mechanism to hold and set glass halftone screens. A special xerography plate adapter is also available.

Miehle Adds 25x38 to Offset Line



Miehle Printing Press and Manufacturing Co., Chicago, recently announced the availability of two offset presses, the Miehle No. 38 Single Color Offset and the No. 38 Two Color Offset. The new presses will handle a maximum sheet of 25½" x 38" and bleed a 25" x 38" area at speeds up to 7000 impressions per hour. Features of the Miehle 29, 36, 41, and 49 offsets are incorporated in the new 38's. The presses are being built to Miehle's specifications by Faber & Schleicher, Offenbach am Main, West Germany. Pictured is the delivery end of No. 38 two-color showing pressman removing sheet while press is running.

Premco Catalog Out

Premier Graining Co., Chicago, has published a new catalog of Premco supplies for platemakers and offset printers. The pocket-size edition includes a list of Premset Ink Colors and ink and water rollers, as well as the regular offset equipment.

Ektachrome Available in New Sizes

The new Kodak Ektachrome Film (Process E-2) first introduced Jan. 1, in the miniature camera 35mm and 828 sizes, is now available in 120 and 620 roll film spoolings, Eastman Kodak Co. announced this week.

Kodak is discontinuing the manufacture of Process E-1 Ektachrome roll films in these sizes, company spokesmen said.

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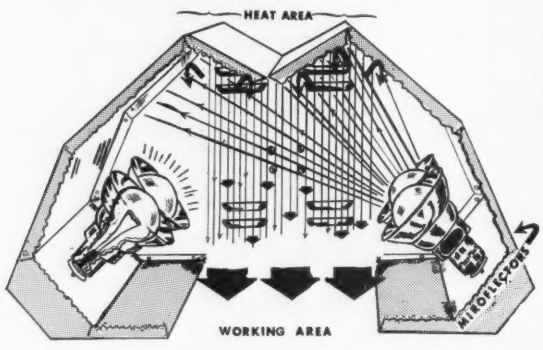
New Color Separation Light



Natural Lighting Corp., Glendale, Calif., has introduced a new color separation light for the graphic arts industry featuring reflected light principle. Groverlite "Northern" has a heat absorbing and reflecting metal back in the form of a "W" with six household lamps in special reflectors. Mats are supplied for 4x5, 5x7, and 8x10 transparencies which are held in glass envelopes and clipped into slots.

Rayner Publishes Varitype Book

Complete alphabets, suggested combinations, and demonstrations of reductions of as much as fifty percent are included in a new booklet on IBM and Varitype services from Rayner Lithographing Co., Chicago. The handbook is available from the company, 2801 West 47th St., Chicago 32, Ill.

"Look To Lawson" Catalog

Cutting machines and bindery equipment manufactured and distributed by E. P. Lawson Co., New York and Chicago, is described in a new illustrated folder released last month.

The Lawson 39″ Automatic Clamp Cutter, 46″ and 52″ Hydraulic Clamp Cutters, Electronic Spacer, 3-Knife Rapid Trimmer, Multiple Head Drill, Air Cushion Device, Drill Sharpener and Hollow Drills are described.

•

"Colorstat" New Print Method

Authenticolor, Inc., New York, has developed a full-color photographic print method for client presentation and for salesmen's samples of display materials. It can be produced from original art, transparency, or from the product itself, the company said. This new process, "Colorstat," is a registered trademark.

•

ATF Super-Chief in New York

AFT's regional office in New York announced their display of the new high speed press in the 29 inch size range, the Super-Chief, in an unusual three-color invitation folder. Display dates were June 6-24.

•

Pope & Gray Has New Catalog

Quickset Offset inks are described and are also used to print a new Offset Ink catalog, just published by Pope & Gray, Inc., Clifton, N. J. Compared with conventional offset inks, Quickset Offset inks have better water resistance, higher finish, sharper working qualities and do not grayback on drying, the company said. Each color is lithographed on offset and coated paper in the booklet. Light-fastness and opacity characteristics are listed on a flyleaf and perforated number tabs in the catalog make it easy to use in color matching.

•

Darling-Payne Selling New Camera

Darling-Payne Corp., New York, has announced that they are now distributors of the new Wesel "25" camera made by Wesel Manufacturing Co., Scranton, Pa.

The new camera was designed specifically for offset and silk screen plants. It is a horizontal, precision camera of lathe-type monorail design with a 30 x 40 copyboard and a 25 x 25 vacuum back. Darling-Payne is offering the Wesel "25" on a two-month rental purchase plan.

•

Reproduction Materials Listed

All Kodagraph materials available from Eastman Kodak Co. for the preparation and reproduction of drawings and documents are described in detail in a new booklet now being distributed.

A two-page materials selection chart shows the material to be reproduced, matched with the equipment to be used.

New Transparent Lacquer

Nutran Overlay Lacquer, product of Henry P. Korn, New York, is a new transparent lacquer for dot etching in lithography and for air brush work. The lacquer, water and acid resistant, is applied with a brush as a protective coating on all parts of the gelatine surface of films and plates.

It can be used in a drawing pen so that fine lines can be produced to eliminate those parts of the work that are excluded from air brush treatment and etching.

Use of the product on continuous tone negatives and positives and halftone plates will be of special value, the company said.

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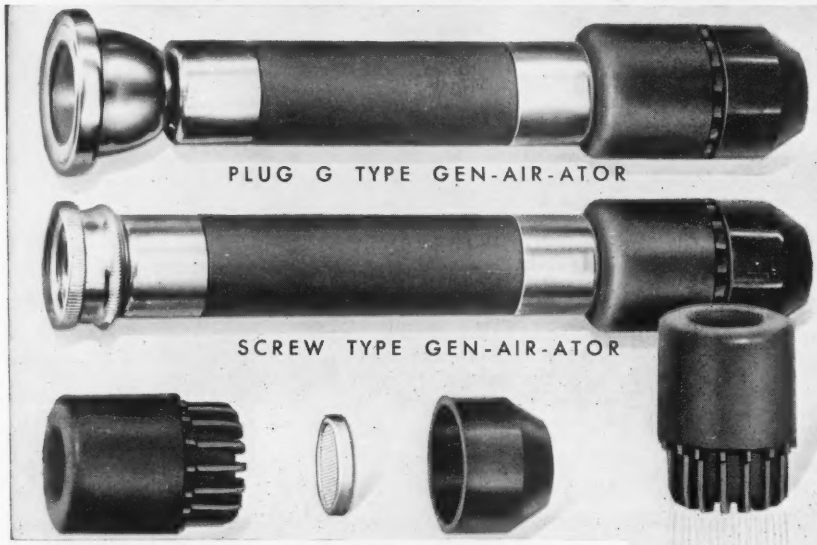

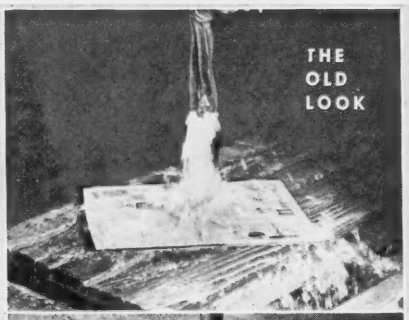

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GEN-AIR-ATOR PRICES — Complete units with soft rubber hose, overall lengths 6" to 12" $2.85 each. For units over 12" long add 5c per inch. GEN-AIR-ATOR Heads only $1.00 each. When ordering, please specify length desired, plug G type or screw type.

Bar-Plate Mfg. Co.'s new layout — stripping-lineup table.

Bar-Plate Shows Line-up Table

Bar-Plate Manufacturing Co., Orange, Conn., has developed the *IMPERIAL* line of 2-way layout-stripping-lineup tables. Mechanical mechanism includes two precision stainless steel straight-edges operable by a vernier control mechanism. Straight-edges are positioned at right angles to each other, operate in machine-cut chain, and are operable simultaneously or individually. The surface on the table is ¼" plate glass.

•

Three New Products from du Pont

The du Pont Co.'s Photo Products department has announced the availability of the following new products to graphic arts dealers:

(1) "Velour Black" photographic projection paper, surfaces A, B. BT, R, and T (contrast grades 1 through 4), in a number of standard sizes and packages.

(2) Reflex copy paper in all standard sizes and packages.

(3) "DH" dehydrated photographic emulsion.

•

Produce Fluorescent Images

Details on production of permanent fluorescent images on Metalphoto aluminum plates are contained in a new catalog sheet just released by Metalphoto Corp., Cleveland.

Key to the process is Aluma-Glo, a newly developed chemical preparation which permanently imbeds the fluorescent glow in the photosensitive anodized layer of the Metalphoto plate, the company said. Under an ultraviolet light, only the white portion of treated instrument dial faces, displays and other products featuring Metalphoto plates will glow.

The image to be used is produced as an ordinary film negative, then transferred to the photo-sensitive Metalphoto plate using standard photographic solutions and techniques. After the plate is washed and dried, it is dipped into a bath of Aluma-Glo; finally, the image and the fluorescence is sealed by submerging the plate in boiling water.

How To Use Burnishine

J. C. Paul & Co., Skokie, Ill., has announced new 1-lb. and 5-lb. cans of Burnishine Putz Pomade with a redesigned label giving detailed instructions for using the product on press rollers. A wash-up, Burnishine Putz Pomade eliminates stripping and glazing on rollers, according to the company.

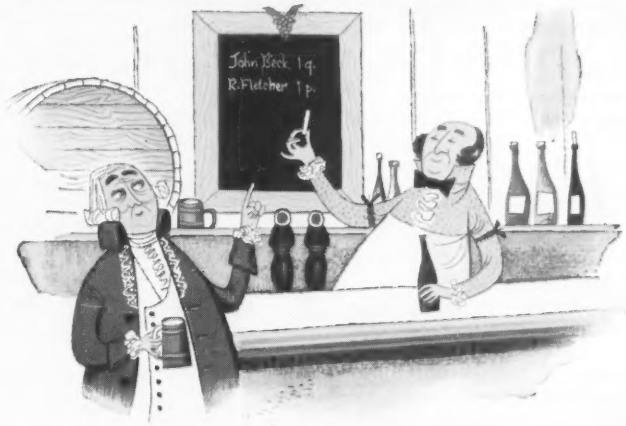
•

Kodak Has New Screen Sizes

A new 29 x 29-inch screen with an over-all size of 31 x 31 inches has been added to the Kodak Magenta and Gray Contact Screen lines for photolithography.

In magenta the new size will be available in 120, 133, and 150 line rulings. In gray the new size is available in 150 line rulings only. List price for the new size in either magenta or gray is $186.00.

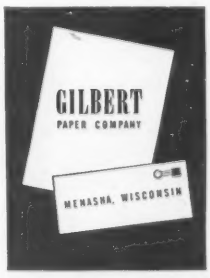
Do you know how this Expression began?



"Mind Your p's and q's"...

One theory is that p's and q's were the symbols tavern owners used to register their customers' credit purchases of *p*ints and *q*uarts. More likely, the expression started from the caution to printing apprentices when sorting type that they "Mind their p's and q's" because of the similarity in appearance.

Similarity of appearance is not a problem in selecting a paper for your business letterhead. You'll find Gilbert new cotton fibre bond papers offer a new brightness and superb cockle finish unmatched by any bond paper made. They are superior, too, for erasability. Available through your Gilbert Paper Merchant.



Gilbert papers

new cotton fibre content bond papers

1) In front of the new Miehle #76 Five-Color Offset Press at the Strobridge Lithographing Co., Cincinnati, are (l. to r.), Andrew Donaldson, Jr., plant manager, Frank Miller, foreman, and Harold Merten, vice president.

2) A. H. Pugh Printing Co., Cincinnati, is expanding in both offset and letterpress. Pugh recently installed this new Model LTV (single-color 17½ x 22½") Harris offset press. President William H. Pugh (right), and Richard A. Navratil, Harris-Seybold's representative in Cincinnati, are examining a sheet fresh off the delivery pile.

3) Clearing the way for larger and faster presses, Edward Stern & Co., Philadelphia, scrap an old Model #54 Single Color Miehle offset press. A new Miehle #76 Four Color offset printing press is being added. Maurice Segal, president of Edward Stern & Co., is shown striking the first blow. Watching are Charles Mills, Philadelphia manager for Miehle (center) and Williams J. Stevens, eastern district offset sales manager.

New Equipment Installations

F. P. Rosback Co.

Alabama School of Trades Print Shop, Gadsden, Ala., "Twenty-two Special" Perforator; Conway Printing Co., Conway, Ark., Rosback Gang Stitcher; DeWitt Publishing Co., DeWitt, Ark., Rosback "Twenty-two Special" Perforator; Paragon Printing Co., Little Rock, Ark., Rosback Pony Vari-Speed Perforator; Louis Thomas, Los Angeles, Rosback Auto-Stitcher; Precision Bindery Service, Van Nuys, Calif., Rosback Auto-Stitcher; Finlay Brothers, Hartford, Conn., Rosback Auto-Stitcher; The Bradentown Herald, Bradentown, Fla., Rosback "Twenty-two Special" Perforator; Balmoral Hotel, Miami Beach, Rosback "Twenty-two Special" Perforator; The Golden Gate Hotel, Miami Beach, Rosback "Twenty-two Special" Perforator.

Cypress Press, St. Petersburg, Fla., Rosback "Twenty-two Special" Perforator; Darby Printing Co., Atlanta, Ga., Rosback Gang Stitcher; Merchandise National Bank, Chicago, Rosback "Twenty-two Special" Perforator; Universal Offset, Chicago, Rosback Auto-Stitcher; Flora Record Publishing Co., Flora, Ill., Rosback Auto- Stitcher; Vanco Printers, Inc., Freeport, Ill., Rosback Auto-Stitcher; Hamilton Press, Hamilton, Ill., Rosback "Twenty-two Special" Perforator; H. P. Henrichs Publications, Litchfield, Rosback Auto-Stitcher; Proviso Township High School, Maywood, Rosback "Twenty-two Special" Perforator; University of Illinois, Urbana, Rosback Auto-Stitcher; Joe Budd Bookbinding, South Bend, Ind., Rosback Pony Vari-Speed Perforator; Stump Printing Co., South Whitley, Ind., Rosback Auto-Stitcher.

The Journal, Exira, Iowa, Rosback "Twenty-two Special" Perforator; Red Star Printing Co., Wichita, Kan., Rosback Auto-Stitcher; Transylvania Printing Co., Lexington, Ky., Rosback Auto-Stitcher; Smith Printing Co., Crowley, La., Rosback "Twenty-two Special" Perforator; Franklin Printing Co., New Orleans, Rosback Auto-Stitcher; R. Molenaar, New Orleans, Rosback Auto-Stitcher; Southern Printing Co., New Orleans, Rosback Auto-Stitcher; The Drake Co., Shreveport, La., Rosback "Twenty-two Special" Perforator; A B C Finishing Co., Baltimore, Rosback Auto-Stitcher; Hub Mail Advertising Service, Inc., Boston, Rosback Auto-Stitcher; Ind. School for Crippled Children, Boston, Rosback Auto-Stitcher; Richard W. Skeffington, Salem, Mass., Rosback Auto-Stitcher; Dorrington Press, Waltham, Mass., Rosback Auto-Stitcher.

C. Lake & Son, Dearborn, Mich., Rosback "Twenty-two Special" Perforator; The Great A & P Tea Co., Detroit, Rosback Pony Vari-Speed Perforator; Helm, Inc., Detroit, Rosback Special Six Punching Machine; Commercial Press, Minneapolis, Rosback Auto-Stitcher; Johnson Printing Co., Minneapolis, Rosback Auto-Stitcher.

The Office Supply Co., Jackson, Miss., Rosback "Twenty-two Special" Perforator; Lomax Printers & Stationers, Laurel, Miss., Rosback "Twenty-two Special" Perforator; Missouri Baptist Press, Jefferson City, Rosback Auto-Stitcher; Central Printing Co., Kansas City, Mo., Rosback Auto-Stitcher; Homer E. Paris Printing Co., Kansas City, Mo., Rosback Auto-Stitcher; Ray Printing Co., Kansas City, Mo., Rosback Auto-Stitcher; Delaney's Bureau of Printing, Missoula, Mon., Rosback "Twenty-two Special" Perforator; Commercial Duplicating Co., Omaha, Neb., Rosback Auto-Stitcher; Lasky Co., Newark, N. J., Rosback Auto-Stitcher.

Manhart Alexander, Inc., Buffalo, Rosback Gang Stitcher 10 Staple; Thorner-Sidney Press, Buffalo, Rosback Auto-Stitcher; Chinese American Press, New York, Rosback Auto-Stitcher; Sam Grobois, New York, Rosback "Twenty-two Special" Perforator; Victory Press, New York, Rosback Pony Vari-Speed Perforator; Taylor Instrument Co., Rochester, N. Y., Rosback Auto-Stitcher; Mason Printing Co., Syracuse, N. Y., Rosback Auto-Stitcher; The Print Shop Frazer School, Syracuse, N. Y., Rosback "Twenty-two Special" Perforator.

U. S. Weather Bureau, Asheville, N. C., Rosback Gang Stitcher; Brooks Litho, Charlotte, N. C., Rosback Auto-Stitcher; Smith Printing Co., Lenoir, N. C., Rosback Auto-Stitcher; Powell & White Printing & Publishing Co., Cincinnati, Rosback Auto-Stitcher; Westerman Print, Cincinnati, Rosback "Twenty-two Special" Perforator; Perlmutter Printing Co., Cleveland, Rosback Auto-Stitcher; St. Luke's Hospital, Cleveland, Rosback "Twenty-two Special" Perforator; Warner P. Simpson Co., Columbus, Rosback Auto-Stitcher.

Oklahoma Bindery Co., Oklahoma City, Rosback "Twenty-two Special" Perforator; Interstate Training Service, Portland, Ore., Rosback Auto-Stitcher; Industry Printing, Reading, Pa., Rosback "Twenty-two Special" Perforator; General Press Corp., Tarentum, Pa., Rosback Auto-Stitcher; Cooper Press, Providence, R. I., Rosback Auto-Stitcher; Herald Press, Providence, Rosback Auto-Stitcher; Narragansett Litho, Providence, Rosback Auto-Stitcher; R & H Printing Co., Providence, Rosback "Twenty-two Special" Perforator; Robinson Press, Inc., Woonsocket, R. I., Rosback Auto-Stitcher; Vogue Press, Inc., Columbia, S. C., Rosback Gang Stitcher.

The Steck Company, Austin, Texas, Rosback Pony Vari-Speed Perforator; Texas Dept. of Public Safety, Austin; Rosback "Twenty-two Special" Perforator; Bennett Printing Co., Dallas, Texas, Rosback "Twenty-two Special" Perforator; Farah Manufacturing Co., Inc., El Paso, Texas, Rosback "Twenty-two Special" Perforator; The Dunlap Co., Lubbock, Texas, Rosback "Twenty-two Special" Perforator; Dow Chemical Corp. Texas Division, Velasco, Texas, Rosback "Twenty-two Special" Perforator; Everett Waddey Co., Richmond, Va., Rosback Supper X X Heavy Perforator; Charles F. McClung Co., Waynesboro, Va., Rosback "Twenty-two Special" Perforator; State of West Virginia, Dept. of Purchases, Charleston, W. Va., Rosback "Twenty-two Special" Perforator; Valley Sales Co., Stevens Point, Wis., Rosback Pony Vari-Speed Perforator.

American Type Founders, Inc.

The Nagold Company, New York, A.T.F. Chief "20" offset press; Westchester Printing Co., Mount Vernon, N. Y., A.T.F. Chief "22" offset press; Schonbar-Leigh Printing Co., New York, A.T.F. "29" offset press; Leslie-Lamm and Miller, New York, 22x29 Big Chief offset press; Wright Photo Offset Co., New York, A.T.F. Mann L-236 offset press.

Litho Studio, Inc., New York, A.T.F. Chief "29" offset press; Morton and Ralston, Inc., New York, A.T.F. Chief "22" offset press; Parkway Printing Co., Inc., Brooklyn, N. Y., A.T.F. Mann L-236 offset press; Nutley Sun Printing Co., Nutley, N. J., A.T.F. Model #6 Little Giant; New York Label and Box, New York, A.T.F. Chief "22" offset press.

Empire Linotype School, Inc., New York, A.T.F. Camera Model #241; Parkway Printing Co., Inc., Brooklyn, N. Y., A.T.F. Chief "29" offset press; S & S. Lithographers, Inc., New York, A.T.F. Camera Model #241; The Adkins Printing Co., New Britain, Conn., A.T.F. "20" offset press.

The Borden Co., New York, A.T.F. Chief "22" offset press; The Mail Box, Inc., New York, A.T.F. Chief "22" offset press; Bronx Art Press, Bronx, N. Y., A.T.F. Chief "20"; Pro Art Publications Co., Westbury, Long Island, A.T.F. Chief "20" offset press.

Picker International Corp., White Plains, N. Y., A.T.F. Chief "20" offset press; Allied Printing Service, Inc., Manchester, Conn., A.T.F. Chief "22" offset press; Precision Printing and Litho Co., Garden City Park, Long Island, A.T.F. Chief "29" offset press; Hudson Litho Corp., New York, A.T.F. Mann Two-Color L-236 offset press.

Roseanne Offset Co., New York, A.T.F. Chief "29" offset press; Devon Press, Inc., New York, A.T.F. Chief "29" offset press; Edgreen Press., Inc., New York, A.T.F. Chief "22" offset press; Colyer Roux Printing Co., Newark, N. J., A.T.F. Chief "29" offset press; Stanpat, Whitestone, N. Y., A.T.F. Chief "20" offset press.

Confort and Co., New York, A.T.F. Chief "29" offset press; World Photo Offset Service, New York, A.T.F. Chief "20" offset press; J. J. Newberry Co., New York, A.T.F. Chief "20" offset press; Acweltone Corp., New York, A.T.F. Mann LP-53 offset press; Knightly Printing Co., New York, A.T.F. Chief "22" offset press; The Hudson Press, Inc., New York, A.T.F. Mann, 25x38, offset press.

Harris-Seybold Co.

Quality Press, Birmingham, Ala., Seybold 34" Dynaclamp, full automatic clamp cutter, Model CHB; Paragon Press, Montgomery, Ala., Harris 23x36" single-color offset press, Model LTN; Biltmore Press, Los Angeles, Calif., Harris 23x30" single-color offset press, Model LTW; Guild Printing Co., Los Angeles, Calif., Harris 17½x22½" single-color offset press, Model LTV; Johnnie Walker Prtg. & Engr. Co., Los Angeles, Calif., Harris 17½x22½" single-color offset press, Model LTV; Delta Lithograph Co., North Hollywood, Calif., Seybold 34" Dynaclamp, full automatic clamp cutter, Model CHB.

Color Crafts, Inc., Stamford, Conn., Harris 23x36" two-color offset press, Model LTP; Tyn Cobb's Florida Press, Orlando, Fla., Harris 23x30" single-color offset press, Model LTW; St. Regis Paper Co., Pensacola, Fla., Seybold Precision 94" mill trimmer, Model M-94; Robinson's, Inc., Tallahassee, Fla., Harris 23x30" single-color offset press, Model LTW.

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SURVEY REPORT

(*Continued from Page* 53)

showed net profit *before* taxes of 27 per cent and net profit *after* taxes of 20 per cent the tops of these two bars would close off at 20 per cent and 10 per cent respectively. This is the exceptional case among the reports analyzed in this survey but certainly from this survey there exists no sound statistical basis for arguing that, typically, profits in the smaller establishments have a wider range than those in the larger establishments.

For the smaller companies (Chart III) net profit *before* taxes, in both 1953 and 1954 was slightly smaller on average than for the larger companies (Chart IV). Conversely, net profit *after* taxes, on average, was slightly higher. (Read figures from charts for 1953 and 1954.)

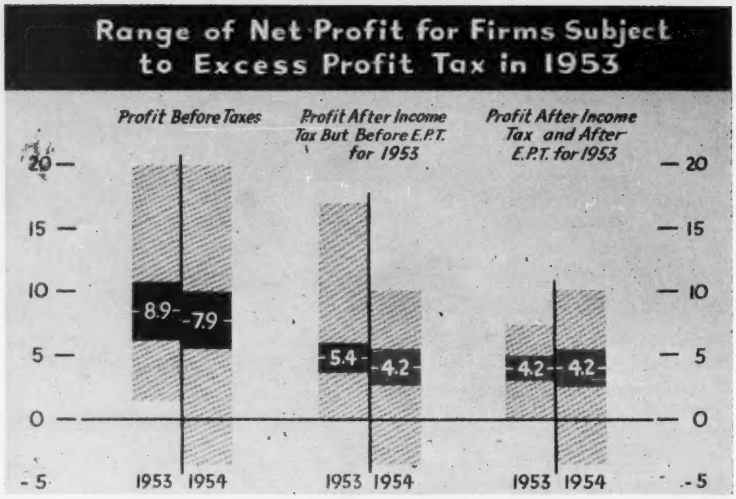

Chart 5

Chart 5

Before passing on to the final two charts, I would like to digress for a brief discussion of the effect of the excess profits tax on lithographers' profits in 1953. Of the 170 companies reporting, 29 were subject to excess profits tax in 1953 and Chart V shows the range of net profits for these 29 companies. The chart is divided into three sections. The section at the left compares for 1953 and 1954 net profit *before* taxes. The middle section shows for 1953 net profit *after* income tax but *before* excess profits tax compared with net profit *after* taxes for 1954. Finally, the section at your right shows for 1953 net profit *after both* income and excess profits tax compared with net profit after taxes in 1954.

Of these 29 companies — and this may surprise you — 15 had net sales of less than $1,000,000 and of these 15, eight reported sales of less than $500,000. Of the 14 companies with net sales of over $1,000,000, nine were in the sales bracket of $1,000,000 to $2,500,000 while only three reported net sales of over $5,000,000. For these 29 companies, net profit *after* taxes remained unchanged at 4.2 per cent in 1954. For the 15 smaller companies, however, net profit *after* taxes dropped from 4.6 per cent in 1953 to 4.2 per cent in 1954

(*Continued on Page* 113)

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INK PIGMENTS

(*Continued from Page* 59)

undertone red), etc. The pigments obtained are bright, strong and rather transparent and are of considerable interest to lithographic printers for process work. Their use is limited because of their comparatively poor light stability and poor resistance to bleed.

Phthalocyanine Pigments

A very important group of non-azo pigments are those known as the phthalocyanine or "Monastral" (*Registered trade mark*) pigments, both blue and green types. They are strong, bright, extremely lightfast, bleed resistant, resistant to chemicals and are available in both the resinated or "Ramapo" and non-resinated forms. The "Ramapo" or resinated form is higher in finish, more transparent and easier to grind than the non-resinated products. Blue phthalocyanine pigments are available as a red undertone blue and as a green undertone blue. The green undertone blue is the most important phthalocyanine pigment introduced to the makers of lithographic inks in the past five years. It approximates Peacock Blue in color of undertone and is several times stronger. Because of this strength, matches for Peacock Blue can be made with this pigment that are comparable in cost despite the higher cost per pound of the phthalocyanine blue. In addition, the phthalocyanine blue is considerably superior in light stability, has better lithographing properties and is more stable to heat. Peacock Blue tends to darken and lose some of its brightness when subjected to heat, which is an important factor to consider with the growing use of heat-set inks. As a result, this phthalocyanine blue has made significant inroads on Peacock Blue's position in the ink industry.

Blues and Violets

Finally, listed under Non-Azo Types are the indanthrene blues and violets. The blues are redder in undertone than the phthalocyanine blues but not as bright. Although comparatively high in price they find some usage where high quality in their shade range is required; if shading a phthalocyanine blue with a red will not suffice. An indanthrene violet is marketed under the name "Platinum Violet". It is quite high in price and, consequently, is used mostly for shading high quality pigments such as phthalocyanine blues. Its light stability, and resistance to chemicals are somewhat comparable to phthalocyanine pigments.

A wide range of pigment colors is available to the lithographic printer today. The goal of the pigment manufacturer is the development of a minimum number of colors, to cover all hues, with phthalocyanine qualities, applicable to any type system or end use, and inter-blendable to reproduce any special hue desired.★

Reproduction of Color Copy

"Color Separation from Reflection Copy," is the newest in the Eastman Kodak Data Book series containing information on photography for the worker in the photomechanical field. It describes the theory involved, equipment, materials, and step-by-step procedures used for making color separations for full-color photomechanical reproduction from reflection copy such as oil or water color paintings, dye transfer and other photographic color prints, fabric swatches, Kodak Flexichrome prints, and pastels.

Masking for reflection copy will be covered in a separate publication to be issued late in 1955, the company said.

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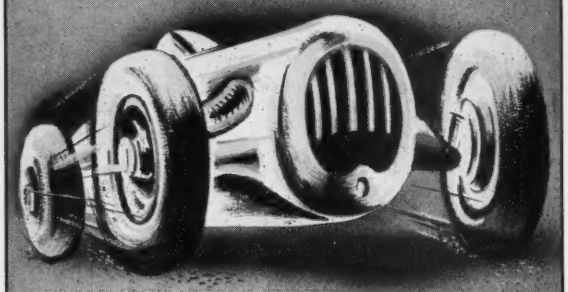

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SURVEY REPORT *cont'd. from p. 110*

while for the 14 larger companies, it rose from 3.7 per cent to 4.2 per cent. Likewise, the 15 smaller companies had suffered a sharp reduction in net profit before taxes (from 9.2 per cent

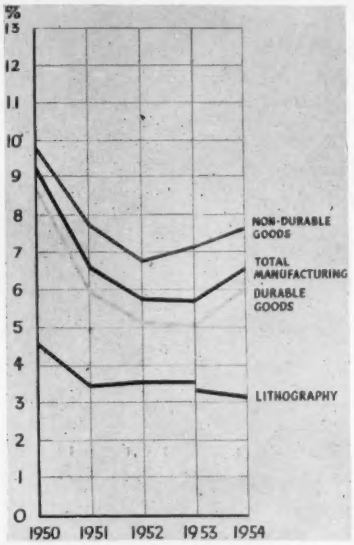

Chart 6—Net Profit After Taxes: Lithography Compared with Total Mfg., Durable Goods and Non Durable Goods (Based on Annual Net Sales).

to 7.4 per cent) while the larger companies just about held their own (8.6 per cent compared with 8.5 per cent).

Chart 6

In concluding last year's profits survey, we presented two charts, based on Federal Reserve Board data, and showing the position of lithographers net profits on sales as compared with other sections of our

(*Continued on Page* 114)

GERMAN VISITOR

(*Continued from Page* 47)

can print with less color than any other in West Germany. "Brandy" explains this means on a typical four color job, such as the confectioner display card, it is actually reprinted to get the color effect such as four colors and bronze, etc.

Press Complement

When it comes to craftsmen, Graphische Kunstanstalt Schultz has an interesting arrangement. On their two color presses there are two men and a girl — the latter an assistant. An apprenticeship lasts three years, during which time the apprentice earns no money. His company takes care of his printing education and induces him to go to a printers' school twice a week. After three years apprenticeship and the school work, he is a well educated printer and starts to earn money.

There are some printers in the Graphische Kunstanstalt plant who have full wages at 18 years of age. It's a rough three years, "Brandy" points out, from his own experience.

Included in the German's tour were visits to the Lithographic Technical Foundation, the U.S. Government Printing Office and the Eastman Kodak plant as well as plants in Los Angeles, San Francisco, Denver, Kansas City, St. Louis, New York, Chicago, Louisville, Milwaukee, Detroit, Cleveland, Rochester, Buffalo, Philadelphia and Washington, D. C. "Brandy" is deeply appreciative of the privilege he had of seeing the offset printing industry in operation in America and of enjoying our "wonderful country."★

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SURVEY REPORT *cont'd. from p. 113*

business and industrial life. Chart VI makes the comparison with total manufacturing (200 companies), with production of non-durable goods (106 companies) and with production of consumers durables (94 companies). Despite the business recession in the first half of 1954, industrial profits for the year chalked up an increase which carried them to the highest level since 1951. As shown on the chart, lithographers' profits have roughly stabilized at the very low 1951 figure and, at the very recovery.

Chart 7

Chart VII covers, for the group of best, have shown no tendency toward selected industries for which information is published by the Federal Reserve Board, the 5-year record of net profit *after* taxes for these industries —and again based on net sales. Reading from top to bottom for 1954, the industries are as follows: Chemicals and allied products, petroleum refining, primary metals and products, machinery, automobiles and equipment and foods and kindred products.

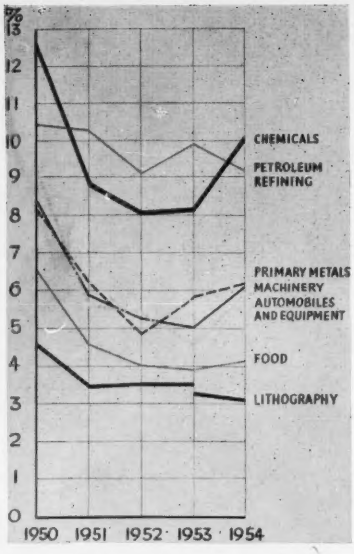

Chart 7. Net Profit After Taxes: Lithography Compared with Selected Industries (Based on Annual Net Sales).

For many lithographers, some of their most important customers are numbered among these industries—a fact, which only serves to emphasize the disappointingly low profit position that we, as sellers, have achieved.

In conclusion, we do not have reliable sales information for lithographers thus far in 1955 nor do we have figures to show the current trend of profits. It is well, however, to survey very briefly the current business picture. For manufacturing companies generally the first quarter of 1955 showed extremely diverse cross currents both as to sales, costs and profits. The National City Bank of New York, in its May Letter, reports, however, that, for 576 manufacturing companies, sales billed in the first quarter expanded about 9 per cent over a year ago, that pre-tax earnings similarly were up about 29 per cent and that net income after taxes was up 26 per cent.

If lithographers are not fully sharing in this burst of activity, then we need to do some careful soul-searching as to the fundamental underlying reasons. Whether ours be a costs vs. profits dilemma or a sales or sale policy vs costs vs profits dilemma, it is, nevertheless a very real one for individual companies — and it can be successfully solved only at the individual company level.★

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PRODUCTION CLINIC

(*Continued from Page 67*)

dry condition and the relative humidity of the room is high, the ends of the sheets will curl. This curling will have a tendency to draw the sheet in while passing between the cylinders. When this takes place, different portions of the sheet will contact the blanket prematurely, causing a slight double or blur which makes the halftones in these areas appear heavy. This is particularly noticeable in multicolor printing.

Dirty dampeners are another common cause for uneven printing. When attempting to run solids, just after completing a long run of labels or uniform images having margins running around the cylinders, the dampeners will become dirty in the image areas and stay clean in the margins. After a sizeable run they become streaked to the extent that uniform dampening is difficult.

Embossed blankets are still another cause for uneven printing. This may give trouble in either solids or halftones. If the blanket has an image embossed on it from a previous job, the embossed area will show up heavy in the new image. In the case of printing halftones, these portions will look full and may even blur or double. Sometimes it is possible to reduce the embossed portion by scrubbing it with pumice. It may also be possible to patch the low area. When patching the low area, be sure to reduce the overall packing, otherwise the excess pressure may damage the plate.

Poorly kept ink fountains also can be the cause of uneven printing. The drip pan under the blade should always be cleaned before it gets to the overflowing stage. If the fountain keys are not cleaned often enough, they become stiff and hard to turn and consequently make fountain setting difficult. Hard ink may collect on the under side of the fountain blade, causing an uneven flow of ink, because it will keep the blade from springing back when the keys are loosened. In other words this hard ink affects the flexibility of the blade. blade.

Regulate Water Flow

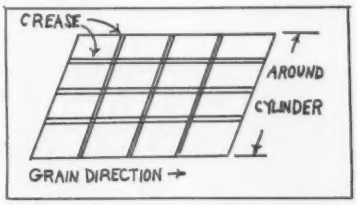
Regulating the flow of water to the plate is important when evenness of printing is desired. Excess water on the plate will not only make the print light, but will eventually cause the ink to waterlog and pile on the rollers.

Setting rollers is recognized by most pressmen as being very important. Yet after taking great pains to set them to the thousandth of an inch, they will upset the plate cylinder from eight to ten thousandths of an inch and still expect to print properly without resetting rollers. It should be remembered that rollers can and do have uneven surfaces. Plates, of course, are also generally uneven. Therefore, if the plate is reduced several thousandths of an inch, the rollers will barely make contact, and if it happens that the low spot in the roller meets the low spot in the plate surface, poor and uneven printing will result. If the cylinder circumferences must be changed to correct register, rollers should be reset accordingly.★

PRINT LENGTH

(*Continued from Page 42*)

.030 thick. No draw allowance is made for creases across the cylinder.



Press Plate Layout

One method for making the press plate is to start with the cutting and creasing die. A strike-in sheet is

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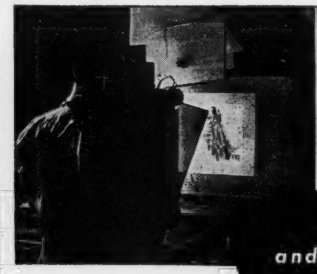

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made from the die, center lines are marked on the cartons. The center to center dimensions of the cartons is marked on the strike-in sheet. To these dimensions are added the draw allowance for the creases with the grain. Next, the image curvature growth is subtracted. These dimensions are then the center to center dimensions used for making the press plate on a step and repeat machine. Example:

Center to center of cartons on finished die	8.000″
Allowance for 2 creasing draws	.010″
Center to center of cartons	8.010″
Image growth due to curvature (8 x .002)	— .016″
Press plate center to center	7.994″

A second method for making the press plate is to follow the original sheet layout, which gives center to center dimensions of cartons, then add to these dimensions the creasing draws, and subtract the image curvature growth. This gives the center to center dimensions for the press plate. In this method it is necessary for the die maker to adhere to the dimensions of the original layout sheet so that tolerances do not accumulate on a multiple carton die. The die variable is controlled in this operation, and printing plates are made independently of the dies.

A third method for making the press plate when information regarding a particular carton job is not available is to proceed as follows:

1. Make the die for the job.

2. Place the die on a cutter and creaser, used for proofing purposes.

3. Make-ready the jacket with a counter sheet.

4. Run several sheets of carton stock with the cutting knives made ready with light pressure, so that the cartons' are cut but not separated. The cut sheet remains in one piece.

5. Check the cartons for uniformity and accuracy. Make changes in the die, the make-ready on the jacket or the cutting press if necessary. This operation is complete when the cartons are uniform in size and are made to specifications.

6. Check the draw of the sheet by measuring the length and the width of the sheet before and after die cutting.

7. Find the draw for each carton: Divide the draw of the sheet by the number of cartons around and across the cylinder. Example: Total draw of the sheet (around cylinder* —(.040″), number of cartons around cylinder—4, draw for each carton (around cylinder) .040 divided by 4—.010. Across cylinder—.000 (See Fig. 4).

8. Press Plate Layout:

Center to center of cartons	8.000
	+ .010
	8.010
Subtract curvature growth	— .016
Carton Centers on press plate	7.994

Summary

1. The accurate print length problem on any job is simplified by knowing the magnitude of the variables and the method for controlling them.

2. Quality printing is assured and make-ready is simplified when the press plate is made to allow true rolling packing. This eliminates the trial and error method of packing. The image on the curved plate is printed without stretch or distortion. The true rolling contact prevents plate wear.

3. Carton making is simplified by making the press plate with draw and curvature growth allowance, making accurate dies and the correct cutting and creasing make-ready.★

Author Kuehn has had over 20 years experience as an engineer in the graphic arts industry. He has designed and developed offset presses, step and repeat machines, precision cameras, etc. For the past six years he has been employed by the Miehle Printing Press and Mfg. Co., as sales service engineer. In this capacity he has visited offset printers in all parts of the country, and has helped them solve offset printing problems. This article is in answer to a question he hears in all parts of the country.

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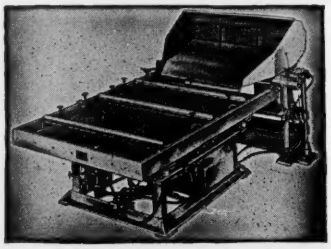

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DRY OFFSET

(*Continued from Page* 63)

resulting negative is also linear. It is our belief that the comparative work now in progress between ANPA Research Institute, Inc., and Fairchild Camera & Instrument Corp. will yield results which will lead to the preparation of an ideal negative.

In conjunction with the ideal negative, there is the "low image loss" feature of the DOW-ANPA etching process. When these two features are put to use, there should be no problems with respect to plate making for dry offset.

The most important problems remaining are: (1) location of a high speed web-fed offset press that can be used for test; (2) more complete investigation of inks; (3) investigation of the ideal negatives; (4) curved plate etching; (5) color by dry offset.

There is little doubt in our minds concerning the quality of work which can be done with dry offset when used for line work. Within the past few months, six more publishers are reported to be using the process satisfactorily. Mr. E. Thomas of the Speaker-Hines Company has made great strides with the halftone reproduction, and this is the phase of the process in which we are vitally interested.★

PHOTO CLINIC

(*Continued from Page* 65)

behind the lens and the screen either removed or placed out of focus. The highlight exposure is made with the conventional arc-lamps. The copy reflects both ultra-violet and visible light from all parts of the copy not containing tones. The tone areas, being fluorescent, absorb the ultra-violet rays and reflect only visible light. The filter permits only ultra-violet rays to pass. Thus, only the background and highlight areas are being exposed during the highlight exposure.

With Kemart copy the same result is obtained but by a reverse application of the fluorescence effect. In this process the tone areas of the copy do not fluoresce, but the background and highlight areas do. Again, the basic halftone treatment is given followed by a highlight exposure using ultra-violet radiation. A filter blocks out the ultra-violet reflected from the tone parts of the copy but passes the visible light from the background and highlight areas.★

YOUR CAMERA

(*Continued from Page* 50)

check points on the camera.

4. An accurate machinist's level, preferably with a bubble graduated in thousandths.
5. A feeler gauge, or
6. A trammel rod with a dial micrometer indicator for checking that the ground glass, vacuum back, and dry plate holder come into the same plane. There are other items that can be used for testing, ranging from a plumb bob to a collimator, but the previously mentioned equipment is usually sufficient in most instances.

If we know the accuracy required for our work it is not difficult to carry out the necessary tests to determine if the camera is all it should be. Good typographical reproduction requires a camera that will resolve at least 40 lines per millimeter (or 1000 lines per inch) if the type character design is to be retained. This figure corresponds to about the maximum that a good lens in the 18 to 30″ focal length range will provide. It also means that image vibration during exposure as indicated by examination on the ground glass should not exceed 1/1000 of an inch, and should preferably be kept to half that amount.

Accuracy

Accuracy between copyboard, lensboard and camera back is conditioned by the class of work being reproduced.★

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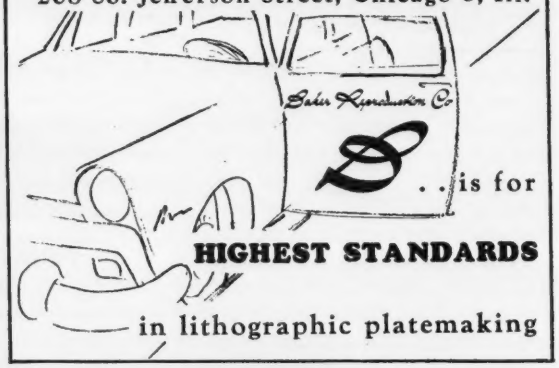

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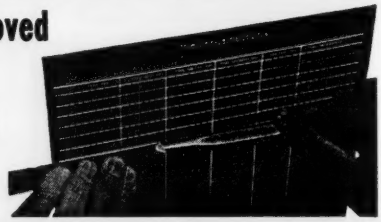

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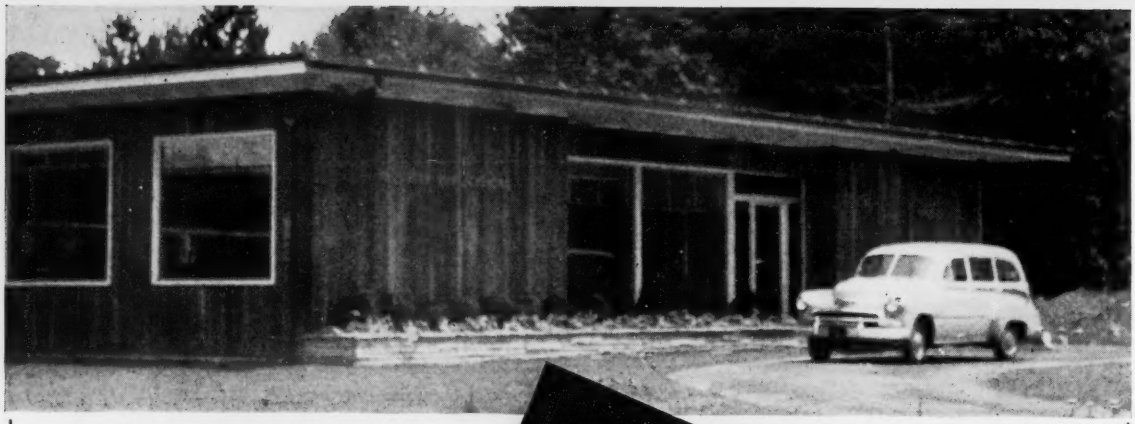

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Tale Ends

SEEMS like everyone is going to IPEX. Hardly a day goes by that we don't get word of another lithographer who is packing his steamer trunk and heading for London. The 10th International Printing Machinery and Allied Trades Exhibition, in case you've forgotten, is scheduled for Olympic Hall, July 5-16. The day-to-day work involved in getting out ML is keeping the staff here, but we'll be reporting IPEX in the August issue. If you are one of the fortunate lithographers in attendance, how about dropping us a note and giving us your impression?

ml

It's time, once again, to round up your self-promotion pieces and send them off to the Printing Industry of America. That is, if you think they are good enough to be entered in PIA's fourth Exhibition and Awards for Printers and Lithographers. Send your entries to Miller Printing Machinery Co., Pittsburgh, by Sept. 23. Miller is one of the sponsors of the contest, and its biggest booster.

ml

The New York Employing Printers Association has quite a record of achievement to talk about, and it does just that in a booklet issued to commemorate its 90th anniversary. Started as The Typothetae of the City of New York, back in 1865, the group has expanded greatly since that time, as the booklet explains. It also notes some of the highlights and significant achievements in lithography during those 90 years. You can get your copy from NYEPA at 461 8th Ave., New York 1.

ml

Largest batch of chrome green pigment in history has been made at the Brooklyn plant of Chemical Colors Division of Reichhold Chemicals, Inc., the company reports. The lot—totaling 30,000 pounds—may have been the largest ever run of any color, Reichhold declares. And where is it all going? To a very worthy cause: for government currency, stamps and bonds.

ml

How do you like our new cover? Credit noted American illustrator Homer Hill, who did the modernization job. Mr. Hill, commercial artist with fine art leanings, is a graduate of the New York School of Fine and Applied Arts and is a member of the Society of Illustrators. He was honored with a one-man show at a meeting of the latter group, incidentally, and the Newark, N. J. Museum of Art has purchased one of his paintings.★

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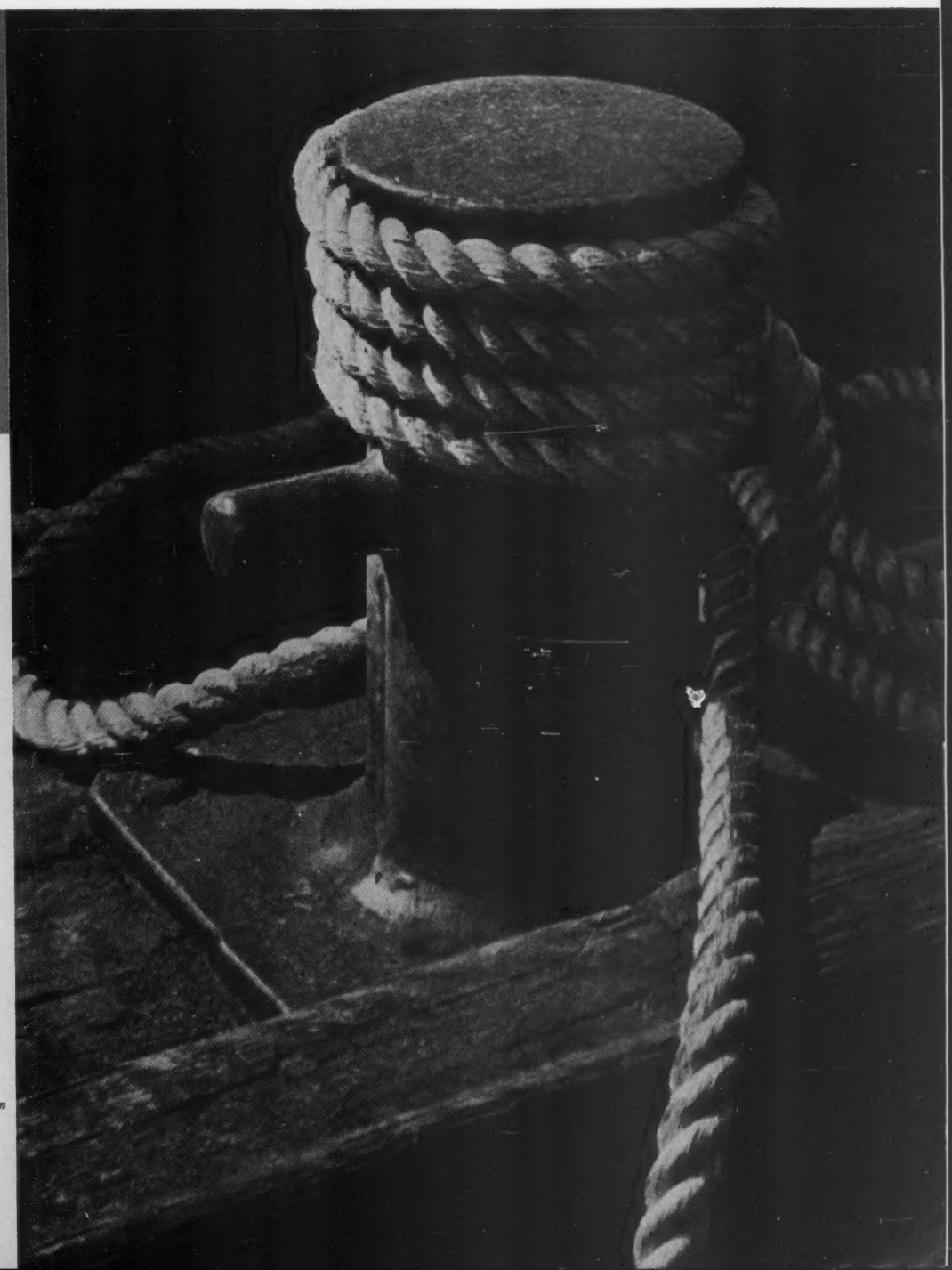
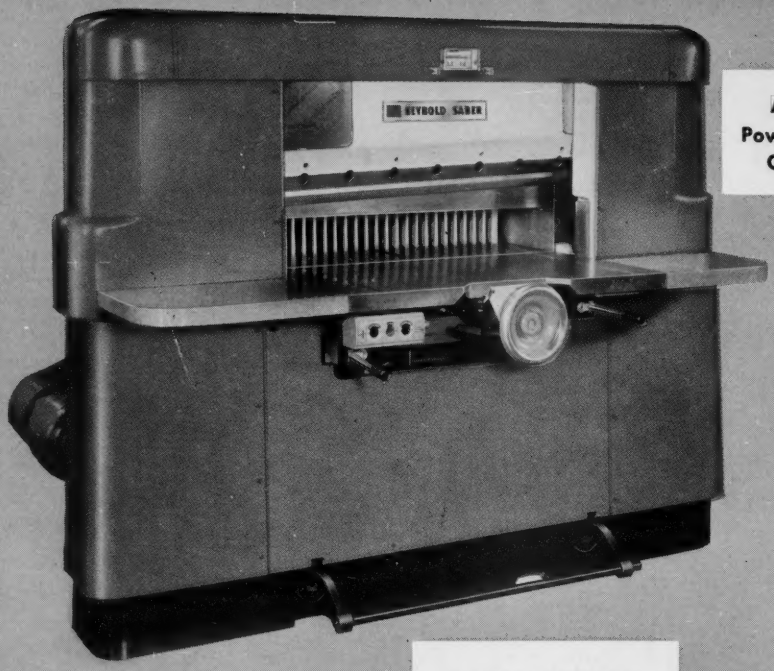


"Strong Ties" by Edw. Wilson



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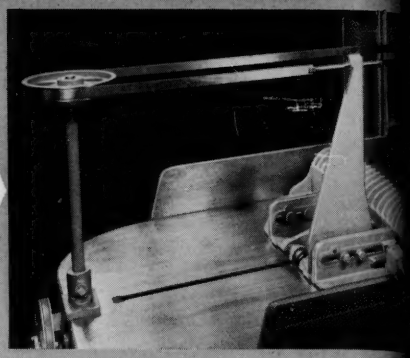

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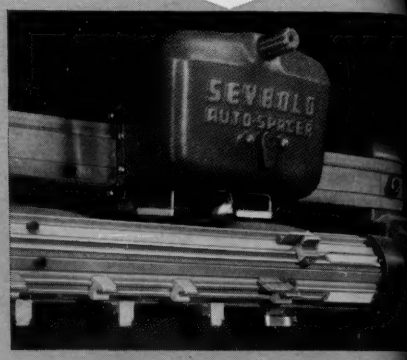

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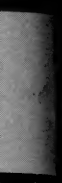

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